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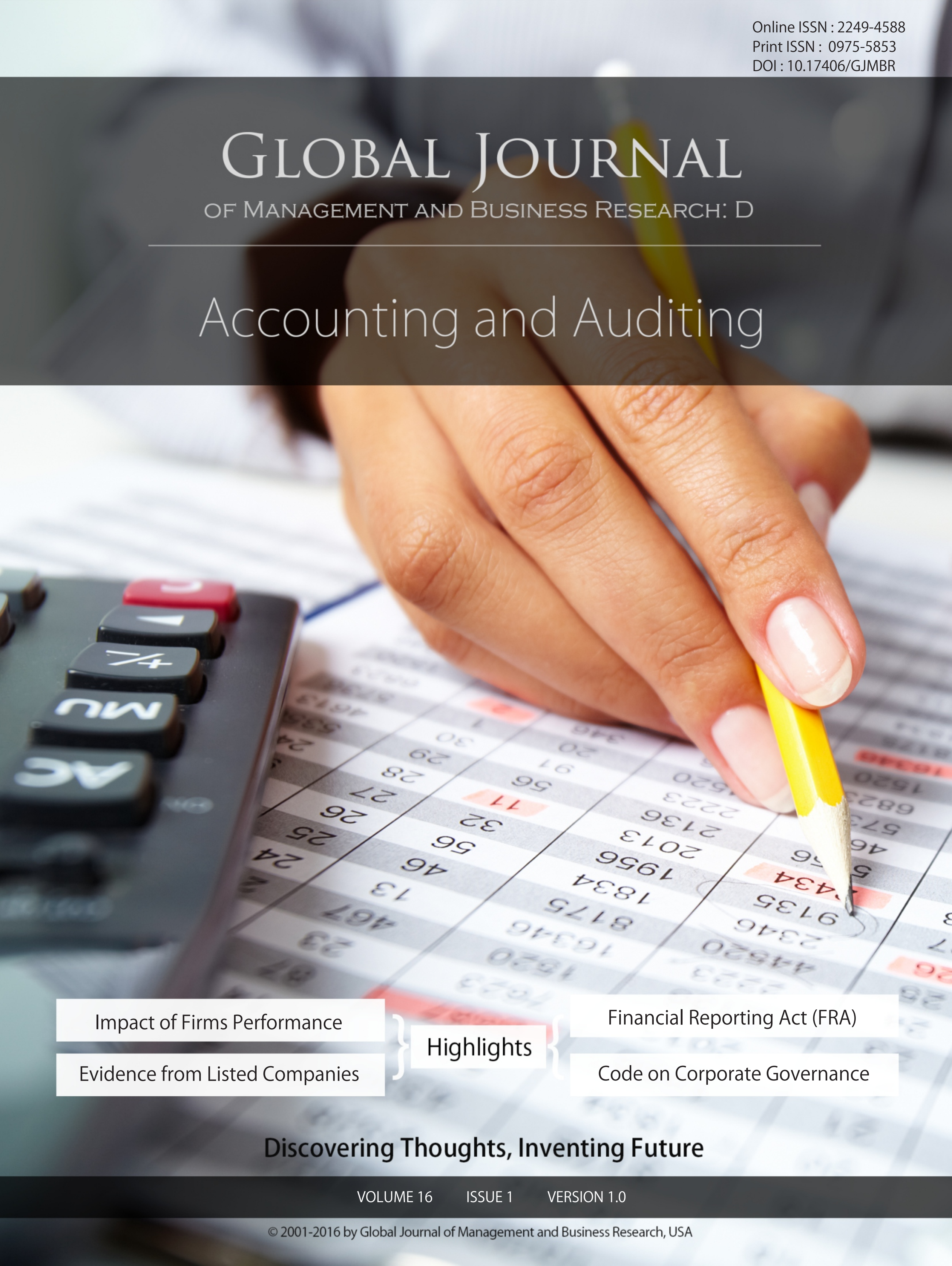
# Global Journal

## of Management and Business Research: D

# Accounting and Auditing



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Highlights

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VOLUME 16 ISSUE 1 VERSION 1.0

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Accounting and Auditing

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# Capital Base and Operational Efficiency in Nigerian Deposit Money Banks (Evidence from a Two-Way Fixed Effect Approach)

By Olarewaju, Odunayo Magret

*Ekiti State University, Nigeria*

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*Strictly as per the compliance and regulations of:*

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*Keywords: capital adequacy, core capital, two-way fixed effect, operational efficiency, deposit money banks.*

## I. Introduction

While efficiency ratio or asset utilization ratio generally measures the efficiency of management in the use of the assets at its disposal, operational efficiency specifically measures how efficiently firm's product has been produced, held and distributed. Kolapo (2006) posited that a firm that is not operationally efficient will not achieve satisfactory return on owners' equity and later finds it difficult to survive adverse economic conditions. Like other firms, banks are not charitable organizations and are out to maximize shareholders wealth by transforming inputs into financial products and services at a lower cost relative to revenue generated from operation. The concept of operational efficiency is crucial for bank survival especially when one view banks as service organizations with overhead constituting the most significant overhead. It is evident that banks generate significant proportion of their income through interest received on disbursed loans and customers' deposits constitute the larger source of this lending, hence, the need to be adequately capitalised is paramount. If an operationally efficient bank requires to be adequately capitalised, it is necessary to critically evaluate the influence of bank's capital adequacy on their operational efficiency. The banking systems of many developing economies have exhibited poor performance, perhaps, in part, due to excessive government regulations and unfavourable business environment. To address this problem, various financial liberalizations, reforms and restructuring programs have been implemented in an effort to foster banking efficiency and a better allocation of resources (Isik & Hassan, 2003). The impact of these measures on bank efficiency has been widely studied with approximately 95% of these works focusing on banks of industrialized countries. However, only a limited number of these studies have examined the impact of capital adequacy on banks operational efficiency in developing economies (Kwan, 2003).

Studies on the importance of operating efficiency for banks in other economies revealed that the key determinants of operational efficiency were affected by the global financial crisis (Siraj & Pillai, 2011). This reinforces the need to understand the drivers of operational efficiency for proper risk management in the Nigerian Deposit Money Banks. The high interest charged by Nigerian banks could be attributed to the inability to push their operational costs downwards despite the increase in capital base of Nigerian banks. This may be due to many challenges in respect of costs and management of risks which banks are exposed to. Operating efficiency is one of the most critical risks faced by financial institutions in the Nigerian environment. For the banking institution to make the best use of their capital base, it is paramount for the sector to operate efficiently.

From happenings in the banking sector, it is evident that some banks were able to meet the 2005 re-capitalisation of ₦25b but still failed in 2009. Could this be a signal that some of the capitals raised by banks on the stock exchange were fictitious as earlier raised by Sanusi (2010)? Surprisingly, few years after the much publicised consolidation in Nigeria, some of these banks that merged together or absorbed other smaller banks to meet up with the ₦25b requirement were later declared distress in 2009. However, some of the banks

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which were able to withstand the re-capitalisation exercise of 2005 without absorbing or merging with other banks are still sound up till date and they are not failing. Could it be that, those few banks that stood alone throughout these hurdles are operating efficiently without any distress because of their broad and adequate capital base?

From the empirical literature, it is worthy of note that not many studies have examined the relationship between capital adequacy and operational efficiency of banks in Nigeria. However, some researchers in developed and other developing economies have examined the impact of bank capital adequacy on operational efficiency and they found out that well-capitalised banks are better run with low unit cost; thereby operating efficiently. Some of these studies include: Berger and Young (1997) in the United State of America; Kwan and Eisenbeis (1997) in Turkey; Ncube (2009) in South Africa; Dhanapal and Ganesan (2012) in India; Abusharba, Triyuwono, Ismail and Rahuman (2013) in Indonesian; Odunga, Nyangweso, Carter and Mwarumbva (2013) in Kenya; Odunga, Nyangweso and Nkobe (2013) in Kenya.

With the aforementioned problems in Nigerian banking sector and with the available literature, it is evident that there is the need to dig deep into the capital base of banks in order to know the relationship between capital adequacy and operational efficiency.

Thus, this paper is aimed at critically examining banks' capital adequacy and operational efficiency in Nigeria.

### a) *Objectives of the Study*

a. To examine the effect of capital adequacy on banks' operational efficiency in Nigeria
b. To measure banks operational efficiency using the accounting approach (that is, Financial Ratio Analysis)

### b) *Hypothesis of the Study*

Ho: Capital base does not significantly influence the operational efficiency in Nigerian deposit money banks.

The paper is structured into six (6) sub-sections. Next sub-section captures the review of related literatures, followed by the methodology, the fourth sub-section focused on the data analysis and discussion of findings, conclusions and recommendations of relevant policies is captured by the fifth sub-section while, limitation of the study and suggested areas for further study is captured by the last subsection.

## II. Review of Related Liteatures

### a) *Conceptual Review*

#### i. *Meaning of Banks' Capital Adequacy*

According to Reserve Bank of New Zealand (2004), capital adequacy is a measure of the amount of a bank's capital expressed as a percentage of its risk weighted credit exposures. An international standard which recommends minimum capital adequacy ratio has been developed to ensure that banks can absorb a reasonable level of losses before becoming insolvent. Applying minimum capital adequacy ratios serves as a protection of depositors. It also promotes the stability and efficiency of financial system by reducing the likelihood of banks becoming insolvent. When a bank becomes insolvent, this may lead to a loss of confidence in the financial system, causing financial problems for other banks and perhaps threatening the smooth functioning of financial markets.

#### ii. *Meaning of Operational Efficiency of Banks*

Deposit Money Banks play an important role as financial intermediaries for savers and borrowers in an economy. All sectors depend on banking sector for their very survival and growth. Operational efficiency of banks is, therefore, essential for a well-functioning economy. Operational efficiency is simply defined as the ability to deliver products and service cost effectively without sacrificing quality. Shawk (2008) defined operational efficiency as what occurs when a right combination of people, process and technology come together to enhance the productivity and value of any business operation, while driving down the cost of routine operations to a desired level.

According to Beck *et al.* (2000), Efficiency in intermediation of funds from savers to borrowers enables allocation of resources to their most productive users. The more efficient a financial system is in resource generation and in its allocation, the greater its contribution to productivity and economic growth. According to Chen (2001), Efficiency in banking has been tactically defined and studied in different dimensions including: (i) Scale efficiency (ii) Scope efficiency and (iii) Operational efficiency, a wide concept sometimes referred to as x-efficiency. Scale and Scope economies, for example, are achieved from the firms' output expansion resulting in an increase in the industry's output and reduction in the costs of production thus leading to the strong technological external economy. A bank has the scale efficiency, when it operates within the range of constant return to scale. Scope efficiency comes into play when the bank operates in different numerous locations. But the main area of interest in this study, which is operational efficiency, refers to the efficient utilization of human and material resources or the efficient use of people, machine tools and materials funds. Better utilization of any or a combination of these three, can increase output of goods and services and reduce costs. Operational efficiency is the tactical planning of an organization to maintain a safe balance between cost and productivity. It identifies the wasteful processes that contribute to loss of resources and organizational profits. It deals with minimizing waste and maximizing the benefits of resource to provide better services to the customers. For effective competition, lowering costs is the best option as internal wastage enhances more cost. Any input that is not processed through a system so as to generate useful output is a waste. It means producing more goods and rendering services with no greater use of resources to commensurate with income generated from the production or services.

iii. *Measures that can Improve Operational Efficiency of Banks*

According to Dhanapal and Ganesan (2012), the following measures will improve the operational efficiency of banks if strictly adhered to.

a. *Innovative product designing:* It is needed to suit the needs of the customers and to have sustainable growth. Examples are: Loans to Small and Medium Enterprises (SMEs) to build more entrepreneurs for boosting the economy, Super Savings accounts, Zero base accounts, Automated Teller Machine (ATM), Cards tie up with other banks, Mobile banking and National Electronic Fund Transfer system of fund transfers etc.

b. *Development of new technology:* Banks have to interact constantly with other industries, trade associations, farming communities, academic/ research institutions etc, so as to initiate studies and pilot projects for evolving better financial models in their banks. For example, solar powered ATM technology save costs.

c. Engaging in the insurance business is catching up. Financial Institutions have started entering insurance business of which banks are not exempted. From mere offering of insurance products through network of bank branches, the business is likely to expand through self-designed insurance products after necessary legislative changes.

d. Reducing overstaffing and introducing other measures for improving revenue generation. This strategy would increase the productivity of the banks. A bank does not need to create irrelevant branches that will increase the number of staff and thereby jack up their operating cost.

e. Corporate Governance: Good corporate governance would bring financial stability and reduces high profile breakdowns. The transparency of the banks' operation is emphasized by the corporate governance. Following the Good Governance Practices is essential for building public confidence and faithful reporting.

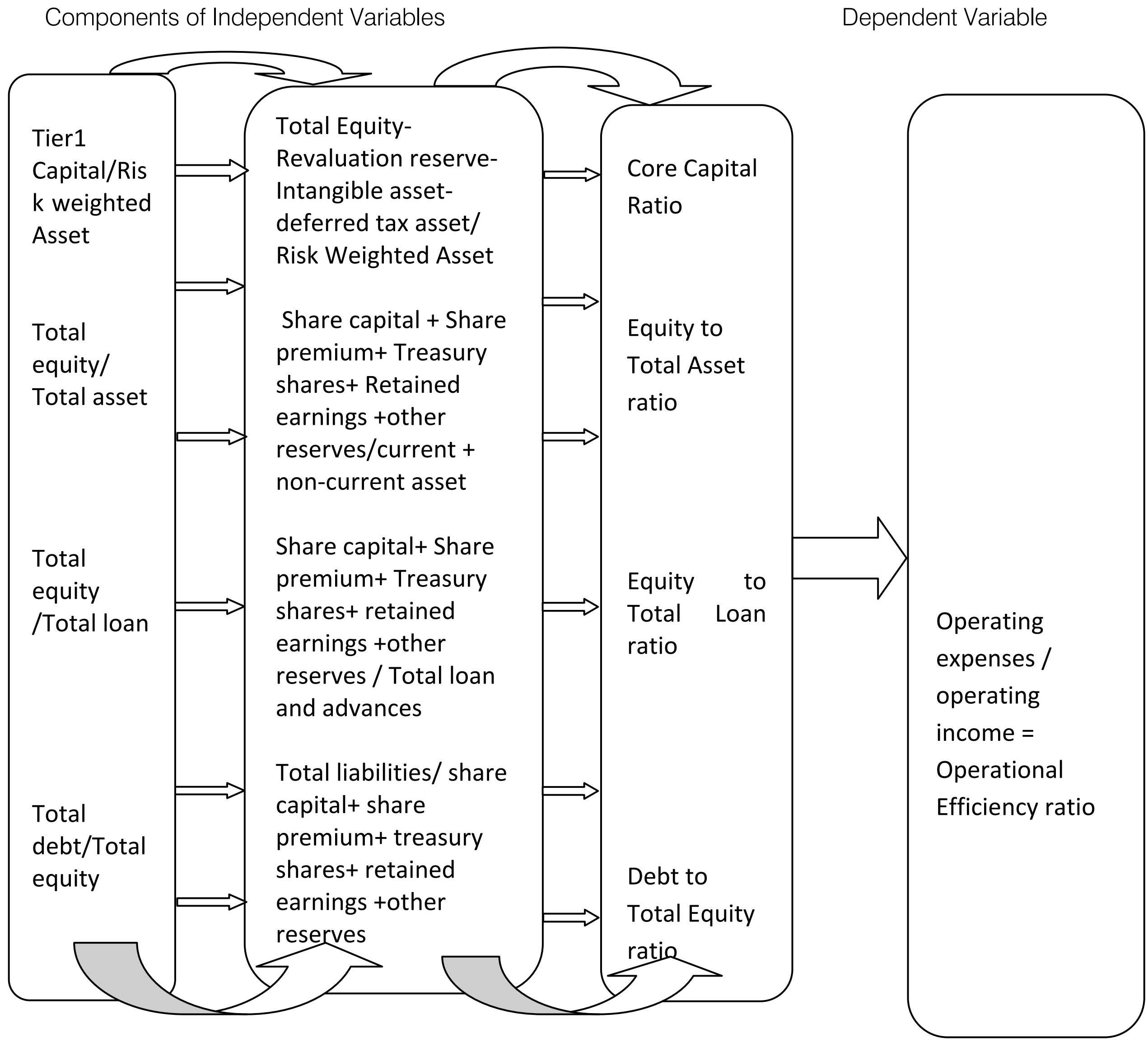


*Figure 2.1 :* Conceptual Framework on Banks' Capitalization and Operational Efficiency

*Source: Olarewaju (2015)*

In the figure above, there are four independent variables affecting the operational efficiency of banks. The ratio of tier 1 capital to risk weighted asset (Core Capital Ratio), total equity to total asset (Equity to Total Asset ratio), total equity to total Loan (Equity to Total Loan ratio) and total liabilities to total equity (Debt to Total Equity ratio), all denote the capital adequacy of banks which is expected to exert a positive influence on banks operational efficiency since capital adequacy serves as a cushion against unexpected loss or fluctuation in operation. Following the study of Djalilov and Piesse (2006), some banks in Central Asian countries are inefficient due to low capital adequacy, low profitability and poor asset quality.

Bank Risk ratio which is a control variable in this paper is measured as the ratio of total liability to total asset ratio will add a greater depth in understanding the risks a bank takes when trying to obtain higher returns at lower cost. If the bank's management takes very little risk, the bank would not be very efficient. Hence, the management should balance the trade-off between safety and operational efficiency and afterwards, a positive relationship is predicted between Bank Risk and operational efficiency.

*b) Theoretical Underpinning*

i. *The Regulatory and Efficient Market-Monitoring Hypothesis*

This was first introduced by Fama (1965; 1970) and it states that regulators encourage banks to increase their capital to measure up with the amount of risk taken by banks. This may be achieved through efficient market monitoring mechanisms that will call for increase in capital when capital positions are deemed inadequate.

Thus, an important factor contributing to a positive relationship between capital adequacy and banks efficiency relates to the behaviours of regulators and supervisors. Banks could respond to regulatory actions forcing them to increase their capital by increasing asset risk (Kim & Santomero, 1988). The need to control the high incidence of loan default occasioned by increased lending activities was a popular motive for reforms in financial systems in developing economies. Harley (2011), stated that government should regulate investment policy for banks for them to be more efficient and be globally competitive.

### c) *Empirical Review on Capital Adequacy and Operational Efficiency of Banks*

Considerable research has been concluded in recent years on the issue of whether the private market place or government regulatory agencies exert a bigger effect on bank risk taken and on bank capital decisions. However, government regulation appears to have become important with the tightening of capital regulations and the imposition of minimum capital requirements.

The financial markets do seem to react to the differential risk positions of banks by downgrading the debt and equity securities offered by riskier banking sector.

However, as Eisenbeis and Gilbert (1985) noted, 'we are not at all sure whether markets discipline works well for small and medium – sized banks, whose securities are not as actively traded in open market nor is it clear that the risk premium imposed by the market on lower-quality bank securities (in the form of lower price and higher interest rates) are really large enough to discipline bank taking'. Also, while the market may make efficient use of all the information it possesses, some of the most pertinent information needed to assess a bank's true level of risk exposure is hidden from the market and is known only to bank examiners.

Is a bank's capital–to-assets ratio significantly related to its probability of failure? Most research studies find little connection between capital ratios and the incidence of bank failure. For example, Santemero and Vinso (1977) found that increased capital does not materially lower a bank's failure risk. Many banks would still fail even if their capital were doubled or tripled - a conclusion backed up by a recent study in New England by Peek and Rosengren (1997) which found that four-fifths of bank's failing in the 1980s and early 1990s were classified by examiners as 'well capitalized'' before they failed. It is by no means certain that imposing higher capital requirements will reduce banking risk. As Wall (1989) observed, banks faced with tougher capital standards may take on more risk in other aspect of their operations in order to keep from earning lower returns.

Apart from its many roles and functions, banks capital acts as protective cushion against losses precipitation by certain kinds of uncertainties. This view looks at capital as a constraint to avoid default and it also acts as a cushion to protect depositors and other creditors against loss at both the operating and liquidation stage.

Graham (1985) emphasizes that, if depositors are going to grow, capital must grow alongside. He affirmed that management disciplines have an effect on capital. In this view, capital constraint helps to avoid over-trading and curbs malpractice by management. Gardener (1989) is of the opinion that prudential guidelines of capital adequacy system have an important effect on bank capital profitability and efficiency.

While mandatory capital ratios help to set a corresponding profit target for banks, capital adequacy might influence banks cost of capital and its overall cost of fund. Ceteris paribus, higher capital adequacy ratios may restrict the competitive abilities of banks. Apart from this, they also affect banks growth capabilities. This view takes into consideration the effect mandatory capital ratios have on banks performance being that if the banks are not able to meet up with the mandatory capital ratio, it places a constraint on their lending abilities which eventually affects their primary aim of money creation.

Oluyemi (1996), stated that capital plays a significant role in the banking sectors of an economy. The need for adequacy capital for banks is a pressing problem not only in Nigeria but also to a very large extent in many countries especially in developing economies.

Ayodele (1998), for instance suggested, that over the period 1952-1975 in the banking industry, a relatively large number of banks that failed were due to under capitalization. However, Bank of International Settlement (B I S) emphasized that, capital is one of a number of factors to be weighted in assessing the strength and efficiency of banks. Familoni (2000) however, defines banks capital as the equity value of its future net earnings. This implies that capital is the total asset less total liabilities. He also stressed that capital is required in sufficient quantity to enable banks perform its functions efficiently and to maintain public confidence.

Sharma, Raina and Singh (2012) employed panel data through stochastic frontier analysis model to measure the source of technical efficiency of Indian banking sector. The major determinant of technical efficiency as revealed by the study are fixed asset, deposit and deposit to total liabilities while, the cash deposit ratio is not insignificant. In a study on the determinants of operating efficiency in Egypt banking sector, Armar, Mustapha and Eldomiaty (2011) found asset quality, capital adequacy, credit risk and liquidity as the main determinants of efficiency in the highly competitive banks.

Using non parametric approach of measuring efficiency by focusing on total factor productivity in the measurement of the determinant of efficiency in the central Asian banks between 2003-2006, Djahlilor and Piesse revealed that majority of the banking organizations are efficient and that the inefficiency observed in some of the central Asian banks are traceable to low capital adequacy, poor asset quality and low profitability.

Employing Data Envelopment Analysis, it is evident that the main sources of efficiency in Nigerian banking sector is market size and the banking sector is not efficient in the pre and post liberalization period because of the distribution in the financial system. (Obafemi, Ayodele & Ebong, 2013). There is a negative relationship between bank efficiency and profitability (Oke & Polodmine, 2012) .Islamic banking group are more efficient in resources allocation while, commercial banks are technically efficient. Like in Nigeria, Abrahim and Abdulmajid (2011) identified size or scale of operation as an important determinant of bank efficiency in Maylasian banking sector (see also Adewoye & Omoriege, 2013). In Mexico, Garza- Garcia (2009) using Data Envelopment Analysis, concluded that loan intensity growth rate of GDP and foreign ownership are better predictors of bank efficiency while non interest expenses, non performance loan and Inflation rate impede bank efficiency.

With the use of Non parametric Data Envelopment Analysis, Inefficiency in Tazanian banks can be traced to inadequate long term capital, poor remuneration, poor management capacity and excess liquidity in terms of technical efficiency. Foreign banks take the lead followed by small and large domestic banks while, small banks are scale efficient followed by foreign and large domestic banks respectively (Aikaeli, 2008).

Efficiency can be improved through investment in new piece of technology. Financial market in India is dominated by public banks and the ranking revealed that they are the most efficient compared to private banks. Consequent to rising number of bank customers, there has been a significant growth in the Jordanian Islamic banks with a concomitant increase in innovation efficiency. Ajlouni and Omari (2009), using both Data Envelopment and Financial Ratio Analysis found that the most profitable banks faced higher risk which makes them operationally inefficient.

According to Ines Ayadi (2013), in the study determinants of Tunisian bank efficiency, using Data Envelopment Analysis, it was discovered that market share in Tunisian banks has inverse impact on their efficiency. Quality of asset suggests that most banks engage in risky activities including credit. In the study, high ratio of quality of asset has negative effect on efficiency because it shows a small yield of bank assets. Tunisian banks tend to be less efficient because they suffer from under evaluation of Credit Risk and misallocation of resources. Therefore, it was denoted that the cost of the Tunisian banks increases with non performing loans.

Employing Data Envelopment fixed effect regression analysis by Sarchez, Hassan and Bartkus (2013), efficient banks in Latin American capitalise earnings in liquidity because the ratio of loan loss reserve to gross loan is negatively related to efficiency and banks with low quality loan are expected to have low efficiency. Also, Kamarudaddin and Rohani (2013) in their Data Envelopment Analysis of efficiency in Malaysian Islamic banks found that size of banking operation, asset quality improves operational efficiency as opposed to corporate social responsibility which is negatively related to cost/operational efficiency. Malaysian banks will be more efficient if they can control non-performing loans, in that the high cost of maintaining loan default will be avoided. Furthermore, employing Data Envelopment Analysis by Endri and Divilestari (2014), it was noted that variable of interest rate is inversely related to technical efficiency and the rate of Inflation on the contrary has positive relationship with banks operational efficiency.

## III. Methodology

*a) Model Specification*

Based on the conceptual framework designed in this study, the following models were formulated to show the relationship between the variables of interest.

$$Y_{it} = \beta_0 + \Sigma\, \beta_i X_{it} + \epsilon_{it} \qquad (1)$$

Explicitly, the model is

$$Y_{it} = \beta_0 + \beta_1 X_{it1} + \beta_2 X_{it2} + \beta_3 X_{it3} + \beta_4 X_{it4} + \beta_5 X_{it5} + \epsilon_{it} \qquad (2)$$

$$OE_{it} = \beta_o + \beta_1 CCR_{it} + \beta_2 ETA_{it} + \beta_3 ETL_{it} + \beta_4 DTE_{it} + \beta_5 BR_{it} + \epsilon_{it} \qquad (3)$$

Y is the proxy of operational efficiency which was measured by operational efficiency ratio using the accounting approach of the measure of efficiency and X is the proxy of the independent variables which was measured by capital adequacy ratios ($X_1$, $X_2$ $X_3$,$X_4$) and Bank Risk ratio ($X_5$). i stands for the total sample of banks (15) and t denotes the total number of years (10) in consideration.

*b) A Priori Expectation*

$$\beta_1, \beta_2, \beta_3, \beta_4 \text{ and } \beta_5 > 0$$

Where $X_1$ (Core Capital Ratio), $X_2$ (Equity to Total Asset ratio), $X_3$ (Equity to Total Loan ratio) and $X_4$ (Debt to Total Equity ratio) are the proxies of capital adequacy. On a priori, the coefficients of $X_1$, $X_2$, $X_3$ and $X_4$ (capital adequacy) are expected to be positive. According to CBN (2004), capital adequacy serves as a cushion against unexpected loss or fluctuation in operation. So, the higher the capital base of a bank, the higher its activities and the higher its operational efficiency. Following the study of Djalilov *et al.* (2006), some banks in Central Asian countries are inefficient due to low capital adequacy, low profitability and poor asset quality. Also, studies of Gul *et al.* (2001); Goddard (2004); Kosmidou (2008); Odunga *et al.* (2013); Sanchez *et al.* (2013), support positive relationship between capital adequacy and bank earnings, though not all were significant, but with the current situation of Nigerian economy, a positive relationship is expected between capital adequacy and operational efficiency.

# IV. Analysis and Discussion of Results

*Table 4.1 :* Descriptive Characteristics of Variables

| Variable | Obs | Mean | Std. Dev. | Min | Max |
|---|---|---|---|---|---|
| OE | 150 | 0.15556 | 0.0703573 | 0.005 | 0.413 |
| ETA | 150 | 0.1457867 | 0.0889667 | -0.319 | 0.413 |
| ETL | 150 | 0.40404 | 0.3138729 | -1.589 | 1.319 |
| DTE | 150 | 7.857353 | 15.80529 | -7.22 | 191.21 |
| CCR | 150 | 0.34426 | 0.2158141 | -0.909 | 0.996 |
| BR | 150 | 0.8481275 | 0.0981351 | 0.267 | 1.319 |

*Source: Author's Computation, 2015 using STATA statistical package 11*

Table 4.1 above presents the descriptive statistics of all the variables used in an attempt to determine the influence of capital adequacy on operational efficiency of Deposit Money Banks. The Table reveals that the average value for OE, ETA, ETL, DTE, CCR and BR of the pooled observations for the period and cross sectional unit covered in the study stood at 0.15556, 0.1457867, 0.40404, 7.857353, 0.34426, 0.8481275 respectively. Reported in Table 4.1 are minimum and maximum values of OE which stood at .005 and 0.413 respectively while, for ETL, DTE, CCR and BR, the Table reports minimum and maximum values of -0.319 and 0.413, -1.589 and 1.319, -7.22 and 191.21, -0.909 and 0.996, 0.267 and 1.319 respectively. The standard deviation of the variables stood at 0.0703573 for OE, 0.0889667 for ETA, 0.3138729 for ETL, 15.80529 for DTE, 0.2158141 for CCR, 0.0981351 for BR. It is noteworthy to stress that Table 4.1 only gave the description of the variables used in achieving objective the study which does not call for any form of inferential analysis

*Table 4.2 :* Correlation Matrix

| | OE | ETA | ETL | DTE | CCR | BR |
|---|---|---|---|---|---|---|
| OE | 1.0000 | | | | | |
| ETA | -0.0848 | 1.0000 | | | | |
| ETL | 0.4357 | -0.0783 | 1.0000 | | | |
| DTE | -0.3780 | 0.0929 | -0.1634 | 1.0000 | | |
| CCR | 0.5779 | 0.0355 | 0.5233 | -0.3439 | 1.0000 | |
| BR | -0.5782 | 0.1233 | -0.7147 | 0.2242 | -0.4686 | 1.0000 |

*Source: Author's Computation, 2015 using STATA Statistical Package 11*

Table 4.2 above explains the correlation between operational efficiency and capital adequacy proxied by ratio of Equity to Total Asset (ETA), ratio of Equity to Total Loan (ETL), ratio of Debt to Total Equity (DTE), Bank Risk (BR) and Core Capital Ratio (CCR). The Table shows that there is negative correlation between operational efficiency and capital adequacy proxied by ETA, DTE, BR while, operational efficiency and capital adequacy proxied by ETL and CCR tends to be positive. From the correlation statistics presented in the Table, it can be seen that there is no strong correlation between operational efficiency and capital adequacy rather mildly weak and/or very weak correlation.

Table 4.2 shows positive correlation between capital adequacy proxied by ETA and other proxies of explanatory variables such as DTE, CCR, BR while, the correlation between ETA and ETL is negative. Thus, majority of capital adequacy proxies tend to move in the direction with the ratio of Equity to Total Asset (ETA). Although, the degree of the correlation is weak and/or very weak. Correlation between capital adequacy proxied by ETL and other explanatory variables such as, DTE and BR is negative, but positive for CCR while, there is negative correlation between DTE and CCR. Notably, the correlation between CCR and BR is weak. Lastly, the Table reveals that there is negative correlation between CCR and BR.

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It is noteworthy to stress that, correlation analyses presented above only gave information on the degree and direction of relationships between pairs of variables employed in the model corresponding to objective two and three, without any reference to the causal-effect relationship between the variables. Thus, negative/positive correlation coefficients reported in Table 4.2 only depicted the direction of the linear relationship between pairs of variables and/or the strength of such linear relationship. However, the general overview of the correlation coefficient reveals that, there is no indication or possibility of multi-co linearity problem in the model where all the observed variables will be employed.

*Table 4.3 :* Two-Way Fixed Effect Estimates

| Variable | Coefficient | Standard Error | T-Test Values | Probability |
|---|---|---|---|---|
| C | 0.2994814 | .0634205 | 4.72 | 0.000 |
| ETA | -0.0055735 | .0069643 | -0.80 | 0.425 |
| ETL | -0.0057056 | .021973 | -0.26 | 0.796 |
| DTE | -0.0008808 | .0002779 | -3.17 | 0.002* |
| CCR | 0.1232206 | .0265005 | 4.65 | 0.000* |
| BR | -0.2543113 | .0653358 | -3.89 | 0.000* |
| Cross-sectional effects | | | | |
| ZENITH BANK | 0.0033405 | .0218654 | 0.15 | 0.879 |
| STERLING BANK | 0.0103981 | .0223073 | 0.47 | 0.642 |
| SKYE BANK | 0.0004334 | .0214986 | 0.02 | 0.984 |
| FIRST BANK | 0.0251221 | .0233023 | 1.08 | 0.283 |
| ACCESS BANK | 0.0236104 | .0209836 | 1.13 | 0.263 |
| DIAMOND BANK | -0.0026756 | .021795 | -0.12 | 0.903 |
| FCMB BANK | 0.0571225 | .0217209 | 2.63 | 0.010* |
| IBTC BANK | 0.015415 | .0271144 | 0.57 | 0.571 |
| UNITY BANK | -0.0071874 | .0219118 | -0.33 | 0.743 |
| UBA BANK | 0.033398 | .0216588 | 1.54 | 0.126 |
| FIDELITY BANK | 0.0489608 | .0219899 | 2.23 | 0.028* |
| WEMA BANK | 0.0632969 | .0258532 | 2.45 | 0.016* |
| UNION BANK | 0.0164259 | .0248452 | 0.66 | 0.510 |
| ECOBANK | 0.023981 | .0233683 | 1.03 | 0.307 |
| Time specific effects | | | | |
| 2005 | 0.018556 | .0175014 | 1.06 | 0.291 |
| 2006 | 0.0242585 | .0175883 | 1.38 | 0.170 |
| 2007 | 0.0040887 | .0173376 | 0.24 | 0.814 |
| 2008 | 0.012346 | .0177444 | 0.70 | 0.488 |
| 2009 | 0.0532566 | .0174012 | 3.06 | 0.003* |
| 2010 | 0.0625517 | .0172537 | 3.63 | 0.000* |
| 2011 | 0.0211278 | .0172763 | 1.22 | 0.224 |
| 2012 | 0.0295974 | .0174324 | 1.70 | 0.092 |
| 2013 | 0.000342 | .0182631 | 0.02 | 0.985 |

*(*) connote rejection at 5% level of significance*

*Source: Author's Computation, 2015 using STATA statistical package 11*

Table 4.3 above presents the two-way fixed effect estimates corresponding to the model used to investigate the influence of capital adequacy on operational efficiency of Deposit Money Banks in Nigeria. The Table shows that all the explanatory variables except Core Capital Ratio exert negative influence on operational efficiency of Deposit Money Banks and thereby denotes that, too much dependence on equity capital should be reduced by banks in Nigeria. Evaluating the result by a priori expectation, it was discovered that the direction of causal-effect relationship between operational efficiency and the explanatory variables contradict expectations. However, the result presented in Table 4.3 reveals that capital adequacy as measured by the likes of ratio of Debt to Total Equity (DTE), Core Capital Ratio (CCR) and Bank Risk (BR) exert significant influence on the operational efficiency while, the influence of other measures of capital adequacy such as ratio of Equity to Total Asset (ETA), and ratio of Equity to Total Loan (ETL) are not significant.

Relating the findings from the result presented in Table 4.3 to previous researches it was discovered that the findings of this study corroborates the findings of past researches; such as Santemero *et al.* (1997), peek *et al.* (1997) where it was asserted that many banks fail or would fail even if their capital were doubled or tripled, meaning capital adequacy does not at all times positively influence operational efficiency, which is the case for some of the measures of capital adequacy (such as ETA, ETL, DTE and BR) employed in this study. On the other hand, the discovery of negative influence of capital adequacy on operational efficiency contradicts the works of Gardener (1989), Ayodele (1998) and Ekundayo (1999). However, in agreement with the works of Oluyemi (1996); Armar *et al.* (2011), the study attested to the fact that capital adequacy is a significant consideration in the discourse of operational efficiency of Deposit Money Banks.

Table 4.3 also reveals the cross-sectional and time-specific effect of all the subject units (that is, all the banks) for the period covered (2004-2013). The reference/based cross-sectional unit for intercept differential analysis is Guarantee Trust Bank while, 2004 was used as the base period for the time-specific effect analysis. From the Table, it was reported that deviation from the cross-sectional reference point (0.2994814) average 0.0033405 for Zenith Bank, 0.0103981 for Sterling Bank, 0.0004334 for Skye Bank, 0.0251221 for First Bank, 0.0236104 for Access Bank, 0.0026756 for Diamond Bank, 0.0571225 for FCMB Bank, 0.015415 for IBTC Bank, 0.0071874 for Unity Bank, 0.033398 for UBA Bank, 0.0489608 for Fidelity Bank, 0.0632969 for WEMA Bank, 0.0164259 for Union Bank and 0.023981 for Ecobank.

However, close check on the probability values corresponding to each of the cross-sectional intercept differential shows that, there is a significant difference between the based intercept and that of banks like FCMB, Fidelity and WEMA which by implication shows that, there are intrinsic organizational factors influencing operational efficiency of the aforementioned banks which cannot be subsumed or assumed to affect other banks, thus, their heterogeneity/uniqueness. This uniqueness might be attributed to managerial standard/competence, technological acceptance and timeliness of decision making of those banks, towards sustaining operational efficiency.

In like manner, Table 4.3 shows further that there is significant difference in the operational efficiency of Deposit Money Banks in year 2009 and 2010 as against other period given the intercept differential that is significant for the two periods/years. The observed time-specific effect might be traceable to the Central Bank of Nigeria policy of 2009 for instance; the 'stress test' conducted which led to the reclassification of banks not by balance sheet size or asset base, but along the lines of grossly endangered, in dangers and healthy.

## V. Conclusion and Recommendations

Premise on the findings in this paper, it is concluded that capital adequacy of Deposit Money Banks of Nigeria has not attained a level where its contribution can significantly spur operational efficiency. Out of CAMEL rating system of banks, other variables like Asset quality, Managerial Efficiency and Liquidity of banks must be given consideration. This prompts the following policy recommendations to ensure better interrelationship between capital adequacy and operational efficiency of Deposit Money Banks in Nigeria.

a) For effective performance, each bank should be allowed to set its own benchmark depending on the desired cushion level and to commensurate with their risk exposures. There are some of the banks that are strong enough to set a capital base more than ₦25 billion while, some that are small can be allowed to set a level they are capable to afford so as to avoid declaration of fictitious assets as earlier proclaimed by Sanusi (2010).
b) The government should make the environment conducive for banks to operate by providing basic amenities like electricity, good roads and other infrastructures. Most importantly, electricity supply constitutes the major operating cost incurred by Nigerian banks.
c) In CAMEL rating system of banks, the apex banks has placed high concentration on the capital adequacy, their attention should also be shifted to asset quality, managerial efficiency and banks liquidity by trying to adopt the Basle III whose focus is based on liquidity management of banks.
d) The risk weight categorization and computation of banks' asset should be consistent and it should be more standardized and adequately publicized to ensure easy accessibility to all users.
e) The regulatory authority should ensure that the gains of the banking reforms processes are sustained and the Central Bank of Nigeria should take more decisive measures aimed at tightening the risk management framework of the Nigerian banking sector as this will have a positive effect on their operational efficiency.

## VI. Limitation of the Study and Suggested Area for Further Study

The major limitation of the study is the inability to incorporate all the existing 21 Deposit Money Banks in Nigeria due to unavailability of data which is traceable to the fact that they are not listed on the Nigerian Stock Exchange and their activities are unstable and unsteady. Also, data to capture some of the variables that would have been used to measure capital adequacy were not available in the annual reports and accounts of the banks for all the years covered by the study due to the changes in preparation of accounts from Statement of Accounting Standards (SAS) to International Accounting Standards (IAS) and currently on International Financial Reporting Standards (IFRS). However, the aforementioned limitations do not in any way affect the authenticity of these findings.

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Further research should consider other financial institutions most importantly, insurance companies. Would-be researchers can also carry out a comparative study on using both profitability and operational efficiency as a measure of Deposit Money Banks' performance over the years.

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# Financial Reporting Act (FRA), 2015: A Revolutionary Era for Ensuring Effective Capital Market and Economic Development in Bangladesh

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*Abstract-* Financial Reporting Act (FRA), 2015 is an excellent initiative for ensuring transparency and accountability in accounting and auditing profession in Bangladesh. Auditing is the key pillar of public confidence in corporate governance and reporting and the part of an integrated financial reporting supply chain that includes financial managers, directors, accountants and regulators domestically and internationally. Like other countries of the world, corporate failures and scandals are a bit linked with the accounting profession associated companies in Bangladesh as a result the need for monitoring the auditing and accounting activities grows louder after the recent crisis in the capital market. This study has conducted a SWOT analysis on FRA, 2015.

*Keywords: FRA, FRC, financial reporting, transparency and accountability, capital market and economic development.*

*GJMBR - D Classification : JEL Code : M49*

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*Strictly as per the compliance and regulations of:*

# Financial Reporting Act (FRA), 2015: A Revolutionary Era for Ensuring Effective Capital Market and Economic Development in Bangladesh

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*Abstract-* Financial Reporting Act (FRA), 2015 is an excellent initiative for ensuring transparency and accountability in accounting and auditing profession in Bangladesh. Auditing is the key pillar of public confidence in corporate governance and reporting and the part of an integrated financial reporting supply chain that includes financial managers, directors, accountants and regulators domestically and internationally. Like other countries of the world, corporate failures and scandals are a bit linked with the accounting profession associated companies in Bangladesh as a result the need for monitoring the auditing and accounting activities grows louder after the recent crisis in the capital market. This study has conducted a SWOT analysis on FRA, 2015. The study has revealed that The Financial Reporting Council (FRC) under this Act will be an independent regulatory body that will monitor the auditing and reporting activities and ensure transparency and accountability of the professional accountants in Bangladesh as a result the investors are looking forward to see FRC coming into being soon and bring together key financial reporting stakeholders to ensuring effective capital market and economic development in Bangladesh through overseeing the effectiveness of the financial reporting framework.

*Keywords: FRA, FRC, financial reporting, transparency and accountability, capital market and economic development.*

## I. Introduction

In 1998, the then Prime Minister of Bangladesh has announced that the government of Bangladesh will think about the formation of an independent oversight body to ensure transparency and accountability of financial reporting in the inaugural session of the 13th SAFA conference held in Dhaka. With this announcement, The Institute of Cost and Management Accountants of Bangladesh (ICMAB) felt it as a prerogative to support the Government and prepared and submitted a draft act with respective ministry when the western world could not even think about such an issue even before the enactment of Sarbanes-Oxley Act (SOX) in USA in 2002 (Salim, 2015).

The Sarbanes-Oxley (SOX) Act of 2002 is legislation passed by the U.S. Congress to protect shareholders and the general public from accounting errors and fraudulent practices in the enterprise, as well as improve the accuracy of corporate disclosures. The U.S. Securities and Exchange Commission (SEC) administers the act, which sets deadlines for compliance and publishes rules on requirements. The Sarbanes-Oxley Act was enacted in response to a series of high-profile financial scandals that occurred in the early 2000s at companies including Enron, World Com and Tyco that rattled investor's confidence (searchcio.techtarget.com). As a result of SOX, top management must individually certify the accuracy of financial information. In addition, penalties for fraudulent financial activity are much more severe. Also, SOX increased the oversight role of boards of directors and the independence of the outside auditors who review the accuracy of corporate financial statements (Kimmel, Paul, Weygandt, Jerry, Kieso and Donald, 2011). It created a new, quasi-public agency, the Public Company Accounting Oversight Board, or PCAOB, charged with overseeing, regulating, inspecting, and disciplining accounting firms in their roles as auditors of public companies. The act also covers issues such as auditor independence, corporate governance, internal control assessment, and enhanced financial disclosure. The nonprofit arm of Financial Executives International (FEI), Financial Executives Research Foundation (FERF), completed extensive research studies to help support the foundations of the act. In response to the perception that stricter financial governance laws are needed, SOX-type regulations were subsequently enacted in Canada (2002), Germany (2002), South Africa (2002), France (2003), Australia (2004), India (2005), Japan (2006), Italy (2006), Israel, and Turkey. Debate continued as of 2007 over the perceived benefits and costs of SOX. Opponents of the bill have claimed it has reduced America's international competitive edge against foreign financial service providers because it has introduced an overly complex regulatory environment into US financial markets. Proponents of the measure said that SOX has been a "godsend" for improving the confidence of fund managers and other investors with regard to the veracity of corporate financial statements.

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ICMAB throughout the long process of the development of the Financial Reporting Act (FRA) extended active support to the Government and significantly contributed in the draft of the Act giving important inputs from the year 2006 in line with laws of the other countries. Many of the suggestions and modifications were adopted when the draft of the Financial Reporting Ordinance was prepared and ultimately promulgated on December 30, 2008. This was however not ratified in the Parliament by the newly formed democratic government. Subsequently the present benevolent took the initiative to introduce it as an Act. But for different reasons the act haven't been passed, however, the bud is growing over the year which is a complete tree now. The act finally passed in the Parliament on 6th September 2015 and Bangladesh entered into a new era in the history of disciplined financial reporting. Due to stakeholders' pressure for last couple of years, the Government of Bangladesh is trying to enact such an act, though it failed in multiple instances due to the prescription of a vested quarter (Salim, 2015).

## II. Literature Review

Introduction of Financial Reporting Act in 2015 is an In-Time-Initiative of the Government to maximize the Opportunities of the Capital Market in Up-coming Decades. There is rumor of China, India and beyond theories; if we prepare ourselves we have a strong possibility to be one of the players in the global capital market. Let's work and keep hope alive! (Alam FCMA, 2015).

Ahmad FCMA (2015) has quoted from Honorable President of ICMAB "the Government of Bangladesh has taken a welcome step, now as professional accountants it's our turn to learn more, know more and do more to uphold our professional image".

The World Bank Report on the Observance of Standards and Codes (ROSC), published on May 16, 2003, reflects a true picture of accounting and auditing environment in Bangladesh. The World Bank team suggested a recommendation to establish an independent oversight body -- Financial Reporting Council -- in the report. The regulatory efforts undertaken by the Government of Bangladesh during different times is a continuation of this recommendation. However, for ensuring more accountability, the need for a financial reporting law was proposed by the concerned community in the year 2012.

ICMAB has taken pragmatic role to facilitate the Government in the process of such formation at different capacities as required by the government. Because, the ICMAB, one of the two established accounting institutes exist in the country, believes that it has enough scope of contribution for such initiatives where it is also an active stakeholder. The institute has organized workshops, contributes in drafting the Act, represented in different forums as an expert to the Act and its due process. However, from the very beginning of its inception, the ICAB, the only national institute of the country certifying public accountants, has been opposing strongly against the Act for some reasons which are not properly founded. Even some veteran chartered accountants have written some articles criticizing the Act (Shil FCMA, 2015).

Since the beginning of accounting profession in Bangladesh, The Institute of Chartered Accountants of Bangladesh (ICAB) was the one and only governing body for the country's chartered accountants (Hossain FCMA, 2015).

Kibria (2015) has given more importance on formation of FRC and said that in many cases, ICAB has conflict of interest and so it's so called regulatory role does not appear affective enough. For instance, in three years between FY'10 and FY'12, National Board of Revenue has reviewed some 55,000 audited financial statements on average annually. On the other hand, ICAB listed CA firms that on an average audited some 14,000 financial statements annually. Thus a large number of audited financial statements appeared fake or cooked up although many of those statements of ICAB listed CA forms. Besides the tax authority, it is the responsibility of the ICAB to detect such fake auditing and take action against those involved in such misdeeds. But, very little has been done so far.

Ahmed (2015) says that the proposed Financial Regulatory Council (FRC) will replace any other regulator if there is any for the purpose. But the constitution of the FRC needs to be carried out carefully so that this body truly becomes independent, capable and willing to regulate the rogue auditors. Nowhere in the world, the auditors enjoyed so much of freedom as they enjoy here in Bangladesh. Too much of freedom led them to remain above questioning. They signed many window-dressed financial reports which not only deceived stakeholders like crediting banks and stock investors but also deceived the tax authorities.

Actually, auditors in Bangladesh enjoyed too much of freedom in the absence of an independent watchdog. From now on, the FRC under the Act will ensure accountability and performance of the professional accountants of Bangladesh. Moreover, the council will be a statutory body with members from various government bodies, institutions and professional groups. Now, the investors hope the FRC will ensure that the financial reporting presented before the investors will be trustworthy. Another good thing of the FRA is that for the first time, through this Act, it has recognized the needs for cost and management audit of the public entities. The quality of the financial reports the auditors are supposed to produce depends on how good the regulation is done by the FRC (Ahmed, 2015).

The FRA ensures authenticity of the published accounts of public and private companies. The Act will regulate the auditors and their activities more effectively. Once the auditors are working properly, we expect the accounts to be more trustworthy. Hence the whole country will be benefitted through much more transparency in what the companies share with the general stakeholders. It is important that the rules have no ambiguity and clearly explains how things will work. In case of ambiguity, various parties will take advantage and the FRA will lose acceptability in the bigger society. It is important that the formulation of rules take into account inputs from all concerned bodies and is respectful to a transition stage to enable companies to be more compliant (Nawaz FCMA, 2015).

Chowdhury (2015) states that the main objective of formation of the FRA is to make suitable structure in favor of the people's interest and make it accountable and transparent and maintaining professional standard.

The FRC will oversee the effectiveness of the financial reporting framework in Bangladesh. It will regularly be consider issue related to financial reporting including audit quality and setting of standards, with a view to developing strategic advice to the authorities and stakeholders on these issues. So, the stakeholders' expectations are that the FRC would be the key external advisor to the Bangladesh Government on the financial reporting system (Hossain FCMA, 2015).

Globally it is believed and proved that a high level independent oversight body will work as an effective intervention to reduce the expectations gap that exists between the expectations of the society from auditors and auditors' actual performance. The effective implementation of FRA can be a strong intervention to narrow the expectations gap. The council should be formed in a balanced way which can reduce the monopolistic behavior of public accountants and every interested stakeholder must have a proper representation on the council (Shil FCMA, 2015).

## III. Objectives of the Study

a. To analyze the major elements of Financial Reporting Act (FRA), 2015;
b. To reveal the strengths, weaknesses, opportunities and threats of FRA, 2015;
c. To find out the credible roles of FRA, 2015 in audit industry;
d. To find out the tremendous duties and responsibilities of Financial Reporting Council (FRC);
e. To find out the deliberate responsibilities of management of public interest entities;
f. To find out the relevant responsibilities of ICAB and ICMAB under FRA, 2015; and
g. To find out the significant approaches of FRC to ensure effective capital market and economic development in Bangladesh.

## IV. Major Elements of FRA 2015

*Section 2 (18) - Professional Accountant:* Professional Accountant means the member of The Institute of Chartered Accountants of Bangladesh (ICAB) and The Institute of Cost and Management Accountants of Bangladesh (ICMAB).

*Section 2 (19) - Professional Accountancy Institution:* Professional Accountancy institution means The Institute of Chartered Accountants of Bangladesh (ICAB) and The Institute of Cost and Management Accountants of Bangladesh (ICMAB).

*Section 3- Establishment of Council:* The Act aims at inspiring the auditing and accounting system of the country's financial institutions to international standards, and under the Act, FRC comprising of 12 members will be established, led by a Chairman appointed by the Government. Moreover, the council will be a statutory body with members from various government bodies, institutions and professional groups.

*Section 7- The General Objectives of the Council:* The objectives of the FRC would be:

(a) To determine the code of ethics, standards of accounting and auditing profession; (b) To improve the quality of accountancy and audit services ; (c) To improve the accounting and auditing profession; (d) To ensure the highest quality of accounting and auditing of listed auditors of the council; (e) To enhance the credibility of financial reporting; (f) To ensure the transparency and accountability of functions of accounting and auditing profession; and (g) To motivate for preparing the high quality reporting of financial and nonfinancial information by public interest entities.

*Section 16- The duties and Responsibilities of Chairman of the Council:* The duties and responsibilities of Chairman of the council will be the following:

(a) Conducting administration of the council; (b) Conducting and organizing effectively the activities and matters determined by the council; (c) Preparing annual budget and program; and (d) Performing other duties given time to time by the council.

*Section 21- Annual Report of the Council:* Council shall submit an annual report on its immediate preceding year's functions to the Government within 3 months from the completion its fiscal year. The following matters shall be included in annual report:

(a) Accounts of annual revenues and expenses and related information; (b) Details analysis of the functions of the council; (c) Statement of the achieved goals of the council; (d) Statement of the non-achieved goals with reasons; (e) Statement of brief description of the members of the council and their honorees and other facilities; and (f) Statement of the attendance of members of meeting of the council.

*Section 22-26- Divisions of the Council and Duties of the Divisions:* Under the Act, activities of the FRC will be done through the following four serviceable divisions:

| Division | Duties of the Division |
|---|---|
| a. Standards Setting Division | **(i)** Preparing effective proposal of setting, renewal and developing of financial reporting, value determination, actuarial standards, auditing standards in accordance with the rules and regulations of this act; and **(ii)** Presenting this proposal in the council for approval. |
| b. Financial Reporting Monitoring Division | **i.** Monitoring, analyzing and identifying whether or not any financial reporting standards, auditing standards, code or guidelines of this act or any other act are complied effectively by the public-interest oversight. |
| c. Audit Practice Review Division | **(i)** Monitoring of audit practice related functions of professional accountancy firms; **(ii)** Reviewing of audit practice of any firm that helps to the randomly selected auditor or audit firm; **(iii)** Determining whether or not the firm has complied of audit practice code or auditing standards of this act; **(iv)** Reviewing the control system of the related firm at least once every 3 years; and **(v)** Reviewing whether or not the related firm has taken necessary steps for developing the accounting profession keeping the professional quality. |
| **d.** Enforcement Division | **(i)** Considering the opinions and recommendations given by the other division of the council or any other subject matter relating failure or non-compliance of standards of any acts given directly by any other organizations to the council;<br>**(ii)** Recommending to take possible punishable action for that failure or non-compliance; and **(iii)** Informing it to the related parties. |

*Section 28- Professional Behavior and Code of Ethics:* Council may set Professional behavior and code of ethics for its members and employees with a view to establishing professional behavior for their individual duties and responsibilities.

*Section 31- Registration with Financial Reporting Council:* After the establishment of the FRC, all auditors and audit firms must register in the FRC. Without registration, no auditor and audit firm will be able to provide auditing service to any entity related with public interest.

*Section 32- Application for Registration:* For registration, the auditor or audit firm needs to apply to the FRC. The FRC will review the application and will provide the registration to pursue the rules and guidelines.

*Section 33- Cancellation and Fine of Registration:* If any auditor or any audit firm violates any provisions of the act or any of its rules and guidelines, FRC may cancel or suspend the registration and may fine as well.

*Section 40-43- Setting, Monitoring, Publishing of Standards:* Its key functions include the oversight of the accounting and auditing standards setting processes for the public and private sectors, providing strategic advice in relation to the quality of auditing and advising the authorities on these and related matters to the extent that they affect the financial reporting framework in Bangladesh.

*Section 45- Monitoring of Financial Statements and Annual Report:* The FRC will be the sole watchdog to monitor the functions of auditors and ensure clearness and responsibility in accounting and auditing of financial organizations, including various governments, autonomous and non-government institutions. It will also monitor activities of the country's chartered accountants and cost and management accountants. It will responsible for promoting high quality corporate governance and reporting to foster investment.

*Section 46- Review of Audit Practice of the Auditors of Public-Interest Oversight:* Council, or any officer authorized by it, in writing may review the audit practice of a listed auditor and may investigate, examine and call all records, documents, balance sheet, cash and bank balance, mortgage, other assets etc. and may make query or call for any information or explanation to any partner, employee or agent.

*Section 47- Enforcement of Compliance of Financial Reporting and Auditing Standards:* Council shall give order to change or correct the financial statements under financial reporting and auditing standards to the public-interest oversight if it fails to comply with the financial reporting and auditing standards, code or guideline.

*Section 48- Offence and Punishment:* If anyone has got registration as a auditor by breaking any condition of

FRA 2015 or its section, sub-section, guidelines, standards or by fraudulent way or by providing false information or breaks any rule of this act, then it will be treated as an offence and s/he will be punishable for imprisonment not exceeding 5 years or not exceeding taka 5, 00,000 (five lac) or both.

*Section 54- Appeal Authority:* Government may form an appeal authority, published by gazette, for hearing appeal under FRA 2015 and it will be called book keeping and audit appeal authority.

## V. Findings of SWOT Analysis

A. *Strengths:* Under this study, strengths of FRA, 2015 are divided into two broader heads which hereunder:

a. Establishment of Financial Reporting Council (FRC)

b. Tremendous Duties and Responsibilities of FRC: Act mentions the powers and functions of FRC. The study reveals the duties and responsibilities of FRC that will ensure the strengths of FRA. The council shall-

i. develop and publish accounting, auditing and financial reporting standards and code of conducts to be observed in the preparation of financial statements of public interest entities in Bangladesh;
ii. enter into such contracts as may be necessary or expedient for the purpose of discharging its functions;
iii. provide information service as a central information cell and advisory service regarding accounting and auditing activities;
iv. motivate research work on highly effective financial reporting, accounting, auditing and corporate governance method and provide financing in some cases;
v. conduct investigation and its related programs under this act;
vi. take and implement perfect method or scheme for conducting the objectives and functions of the council;
vii. determine charge and fees regarding services provided by the council;
viii. impose fine and adopt rules and regulations under this act;
ix. co-operate with, or become a member or an affiliate of any similar international body the objects or functions of which are similar to, or connected with those of the Council ;
x. require management assessment of internal controls, including Information Systems controls with independent attestation ;
xi. develop and implement strategies for the issue of standards in order to provide a framework for the council's overall direction in the setting of standards;
xii. license auditors, approve of firms, maintain register and publish relating information;
xiii. monitor and review effectively and efficiently the authenticity and fairness of financial statements and reports of public interest entities;
xiv. monitor the practice of auditors with a view to maintaining high standards of professional conduct;
xv. increase the resources of Bangladesh Securities and Exchange Commission (BSEC);
xvi. monitor the effectiveness of auditor independence requirements in Bangladesh;
xvii. provide the Minister responsible for the FRC with advice and reports about the matters falling within the scope of its responsibilities;
xviii. review, monitor, promote and enforce compliance with the accounting, financial reporting and auditing standards;
xix. receive notices of non-compliance with approved standards from preparers, users, other third parties or auditors of financial statements ;
xx. receive copies of annual reports and financial statements of public interest entities from preparers;
xxi. advise the Government on matters relating to accounting and financial reporting standards ;
xxii. maintain a register of professional accountants and other professionals engaged in the financial reporting process ;
xxiii. monitor compliance with the reporting requirements specified in the adopted code of corporate governance ;
xxiv. promote compliance with the adopted standards issued by the International Federation of Accountants and International Accounting Standards Board (IASB) ;
xxv. monitor and promote education, research and training in the fields of accounting, auditing, financial reporting and corporate governance ;
xxvi. establish such systems, schemes or engage in any relevant activity, either alone or in conjunction with any other organization or agency, whether local or international, for the discharge of its functions ;
xxvii. receive copies of all qualified reports together with detailed explanations for such qualifications from auditors of the financial statements;
xxviii. adopt and keep up-to-date accounting and financial reporting standards, and ensure consistency between standards issued and the International Financial Reporting Standards (IFRS);
xxix. specify, in the accounting and financial reporting standards, the minimum requirements for recognition, measurement, presentation and disclosure in annual financial statements, group annual financial statements or other financial

reports which every public interest entity shall comply with, in the preparation of financial statements and reports ;

xxx. develop or adopt and keep up-to-date auditing standards issued by relevant professional bodies and ensure consistency between the standards issued and the auditing standards and pronouncements of the International Auditing and Assurance Standards Board ;

xxxi. perform such other functions which in the opinion of the Board are necessary or expedient to ensure the efficient performance of the functions of the Council;

xxxii. issue rules and guidelines for the purpose of implementing auditing and accounting standards;

xxxiii. provide advisory, consultancy and informational services on any matter related to its functions to the authorities and the stakeholders;

xxxiv. provide the accounting and auditing issue bulletins for the professional accountants and stakeholders;

xxxv. advise the finance ministry on any matter relating to financial and nonfinancial reporting, accounting and auditing etc.; and

xxxvi. exercise such powers as are necessary or expedient for giving effect to the provisions of the Act.

B. *Weaknesses:* This study finds out the following weaknesses:

(a) Majority of the members of the council are non- professional accountants; (b) As most of the council members will work as high officials of the Government, they have to remain very busy with official work as a result it will be very difficult for them to discharge additional functions assigned to them under FRC; (c) FRA, 2015 fails to make happy to the ICAB; and (d) FRA, 2015 fails to bring together ICAB and ICMAB.

C. *Opportunities:* FRA, 2015 has a great prospect to ensure effective capital market and economic development in Bangladesh through capturing its opportunities which are divided into five broader heads which are hereunder

a. *Playing Credible Role in Audit Industry:* FRA, 2015 shall play the following effective roles and each one can ensure the opportunity in audit industry:

(i) To bring the financial reporting functions into a sound control system; (ii) To adopt standards of accounting and auditing profession; (iii) To enforce, establish and monitor the standards effectively; (iv) To strengthen the confidence of firms that audit public companies; (v) To increase corporate responsibility and usefulness or corporate financial disclosure; (vi) To increase penalties for corporate wrongdoing; (vii) To protect the objectivity and independence of securities analysts; (viii) To increase the reported profitability of the corporate through better transparency; and (ix) To increase the demand for qualified finance professionals will increase for ensuring proper compliance to accounting standards.

b. Fulfill general objectives of the FRC.

c. Getting works done by Management: Deliberate Responsibilities of Management of Public Interest Entities Regarding FRA 2015 are followings:

(i) To assess both the design and operating effectiveness of selected internal controls related to significant accounts and relevant assertions, in the context of material misstatement risks; (ii) To understand the flow of transactions, including IT aspects, in sufficient detail to identify points at which a misstatement could arise; (iii) To evaluate company-level (entity-level) controls, which correspond to the components of the FRC framework; (iv) To perform a fraud risk assessment; (v) To evaluate controls designed to prevent or detect fraud, including management override of controls; (vi) To evaluate controls over the period-end financial reporting process; (vii) To scale the assessment based on the size and complexity of the company; (viii) To rely on management's work based on factors such as competency, objectivity, and risk; and (ix) To conclude on the adequacy of internal control over financial reporting.

d. Ensuring Transparency and Accountability of Professional Accountants: Relevant responsibilities of ICAB and ICMAB under FRA 2015 are hereunder:

(i) To ensure that the Institute meets its responsibilities to maintain high professional standards and develop the accounting profession; (ii) To ensure that all members of the respective Institute shall comply with the Financial Reporting Standards and Auditing Standards issued by FRC; and (iii) A person shall not be entitled to have his name entered in or borne on the Register if he has been removed from the membership of the respective Institute on being found on inquiry not to have complied with the Financial Reporting Standards and Auditing Standards issued by FRC.

e. Ensuring Other Significant Approaches in Audit Industry for Effective Capital Market and Economic Development in Bangladesh: Significant approaches of FRC to ensure effective capital market and economic development in Bangladesh are hereunder

(i) protecting investors and other stakeholders interest through increasing transparency, accountability and perfect information flows on companies; (ii) giving guidance on issues relating to financial reporting and accounting standards to public interest entities; (iii) ensuring good corporate governance practices in the public and private sectors of the Bangladeshi economy; (iv) ensuring accuracy and reliability of financial reports and corporate disclosures, pursuant to the various laws and regulations currently in existences; (v) harmonizing activities of relevant professional and regulatory bodies as relating to Corporate Governance and Financial Reporting; (vi) increasing confidence of investor and all other stakeholders in corporate financial reporting, that is, reporting on financial and non-financial matters and compliance with standards; (vii) facilitating comparability of financial statements. Financial reports of companies will give regulators, policy makers, shareholders and other stakeholders access to greater disclosure, hence the availability of perfect information flows for taking decisions at the top level as well as investor level; (viii) monitoring the quality of published accounts by the FRC will contribute in establishing Bangladesh as a leading regional financial center with a modern and well-regulated infrastructure; (ix) providing assistance to the regulators - Bangladesh Bank (BB), Bangladesh Securities and Exchange Commission (BSEC), Insurance Development & Regulatory Authority Bangladesh (IDRA), National Board of Revenue (NBR), Registrar of Joint Stock Companies and Firms (RJSC) - on the more technical aspects of financial reporting and complex accounting issues; and (x) encouraging with pooling of expertise from regulators and the private sector to improve the quality of financial reporting within the country.

D. *Threats:* This study reveals some threats regarding FRA, 2015 which are hereunder:

a. External Threats: External Threats are -

(i) Conflict of interest of ICAB; (ii) Conflict between ICAB and CIMAB; (iii) Possibility of external threats for not performing the activities of FRC; (iv) Possibility of politicization in FRC; (v) External forces for dividing members of council in different groups; (vi) Inability of FRC to work independently due to bureaucratic problems; (vii) Partial implementation of FRA, 2015; and (viii) Improper establishment of FRC due to personal or political interest.

b. Prospective Internal Threats: Prospective internal threats are -

(i) Unwillingness of the chairman of the council to reach the objectives of FRA; (ii) Conflict among the members of the council; (iii) Self interest of the members of the council; (iv) Insufficient cooperation among the members of the council; (v) Complexity of bureaucracy in the functions of FRC; (vi) Ambiguity of rules of FRC that can create loopholes for various parties; (vii) Intentional inactive performance of FRC; (viii) Enforcement of low quality standards; and (ix) Inefficient and improper monitoring the compliance with standards.

## VI. Conclusion

The Bangladesh parliament passed finally the much awaited Financial Reporting Act (FRA) in September 6, 2015. This was one piece of legislation which took an extraordinarily long time to get it through the lawmaking body - the National Parliament in the face of opposition from the very auditors whose work and functions were supposed to be regulated by this act. In the last few years, more regulatory orders were issued but that did not help the capital market grow in the way investors expected. Still the market is dominated by the poor quality stocks, some of which have frequently been picked up by the day traders as gambling instruments.

With the passage of the FRA, the full circle of reforms in the financial sector, especially issues relating to capital market, is almost complete and now investors will not have much to complain about as to what has been going wrong with the more important aspect of the financial industry such as auditing standards. But passage of the act is one thing, putting it in practice to attain the desired objectives is another thing. Fortunately, this Act has also paved the way for setting up an independent watchdog for the auditing industry which hitherto remained almost free to be overseen. By implementation of FRA the trust of the investors in the capital market will get back because the investors rely on the financial statements to take investment decisions and they believe transparency, accountability and corporate governance will be ensured by this act. It is the high time to the Government to form the FRC as soon as possible to ensure transparency and accountability of professional accountants as well as financial reports and to implement the FRA-2015 for the greater interest of the country.

The economy of Bangladesh is moving forward and its financial sector is also growing despite multifaceted complexity. From small to big, all businesses are in need to transparent and compliant financial accounting reports. In this connection, fully implementation of FRA and establishment of FRC is a must. The largest proportion of stakeholders, and in particular many investors, call for more change including more transparency in financial reporting and a more open and comparative reporting framework process to help improve their confidence in the independence of auditors and the transparency of their audit reports. The country's economy depends on the drive and efficiency of its companies. Thus the effectiveness with which their boards discharge their responsibilities determines competitive position of Bangladesh. They must be free to drive their companies forward, but exercise that freedom within a framework of effective transparency and accountability with a view to showing the true and fair view of financial reporting of the firm for ensuring effective capital market and economic development of Bangladesh.

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# Impact of the Revised Malaysian Code on Corporate Governance on Audit Committee Attributes and Firm Performance

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*Abstract-* Using a sample of 37 finance companies listed under the finance segment of Bursa Malaysia, we examined the impact of the revision to Malaysian code on corporate governance on audit committee attributes and firm performance. Our result suggests that audit committee attributes significantly improved after the Code was revised. In addition, the coefficient for audit committee and risk committee interlock has a significant negative relationship with Tobin's Q in the period before the revision to the Code and before the global financial crisis. The negative direction of the result is contrary to agency theory which suggests that separating directors on subcommittees will create information asymmetry between the directors and lead to poor coordination in the decisions of the committees thereby negatively affecting firm performance.

*Keywords: corporate governance, audit committee, independent directors, expert directors, performance, executive membership, directors interlock, malaysian code on corporate governance.*

*GJMBR - D Classification : JEL Code : M42*

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*Strictly as per the compliance and regulations of:*

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## I. Introduction

The Securities commission of Malaysia (SCM) as one of the regulatory authorities ensures that companies conduct their activities in line with best practice of good corporate governance. This is shown by the issue and continuous revision of the MCCG to ensure that companies in Malaysia have good corporate governance. The Asian financial crisis of 1997/1998 and prior corporate scandals affected investors' confidence in capital market and necessitated the move to enhance the corporate governance practice by companies in Malaysia. This move was started with the setting up of a finance committee on corporate governance to deal with the issue of establishing codes and principles to guide the companies (Ghazali, 2010). One of the outcomes of the committee was the introduction of the Malaysian Code on Corporate Governance in March 2000. The finance committee also established the Malaysian institute of corporate governance which operates as a nonprofit public company limited by guarantee. This move was aimed at restoring confidence of investors in the capital market (Ghazali, 2010). Compliance with the Code developed from this initiative was initially voluntary but later made mandatory by the revised listing requirements of Bursa Malaysia in 2001. The main aim of the first version of the Code was to establish governance structures and processes for the effective running of companies. Such structures and processes include board composition, recruitment and remuneration of directors and the establishment of board subcommittees (http://www.sc.com.my). Since coming into existence, the Code has been revised twice in 2007 and 2012 to enhance its significance and make it in line with the changing needs of the market.

The revision to the Code in October 2007 was done to improve the quality of the board of public listed companies (PLCs) by emphasizing on the enhancement of the role of board of directors, stipulating the role of nomination committee (NC), qualification required for people to be appointed as directors and strengthening the audit committee (AC). The revised Code also mandated companies to have internal audit function; required AC to be composed of only non-executive directors and required the board of directors to be responsible for ensuring adherence to the scope of internal audit functions (http://www.sc.com.my).The second revision issued in March 2012 was aimed at '*strengthening board structure and composition, recognizing the role of directors as active and responsible fiduciaries'* (MCCG, 2012, p.1). It provides recommendations for best practices of corporate governance and its recommendations serve as a general guide for listed companies in Malaysia. The revised Code was aimed at enhancing board effectiveness through board leadership and independence. The Code also encourages companies to disclose high quality and timely information as a way of showing respect to the shareholders right (http://www.sc.com.my). The emphasis on good corporate governance by the MCCG could be noticed by the recommendations of the code for the separation of board leadership and the requirement for the establishment of various board committees. The revised version of the Code emphasized the need for the board to ensure companies conduct their activities in an ethical and sustainable way, recommends that the board should have a competent secretary that will assist it in discharging its function and emphasized on measures to manage risk as well as the need for more quality disclosures (http://www.sc.com.my).

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The first version of the code encouraged the establishment of governance structures and processes for the effective running of companies as well as composition of the board, recruitment and remuneration of directors and the establishment of board committees were also emphasized. The second version emphasized on the enhancement of the role of the board of directors, strengthening the AC, stipulating the role of NC, qualification required for people to be appointed as directors, internal audit function, required AC to be composed of only non-executive directors and stressed on adherence to the scope of internal audit functions. Some of the areas focused on by the third version of the code includes; strengthening board structure and composition recognizing the role of directors as active and responsible fiduciaries, encourages high quality and timely information disclosure, risk management, strengthen relationship between firm and shareholders and recommendation for companies to have qualified company secretary. As could be observed from the above discussion the MCCG was issued and revised in order to ensure that companies have governance mechanisms that are capable of safeguarding the interest of various stakeholders especially in finance companies where there is high agency problem coupled with complex operations, structures and products. This has shown the commitment of the Securities commission of Malaysia in ensuring sound capital market which will enhance the confidence of investors in the market and attract more capital flow into the market and ensure that Malaysia remains one of the best destinations for foreign capital.

The position of finance companies in an economy is central to the accomplishment of the economic goals of the country (Kim and Rasiah, 2010). Therefore, poor governance in finance companies could come with great loss to the entire economy in the form of huge expenditure to rescue the finance companies and failure to accomplish economic goals that are accomplishable only through the financial system (Thillainathan, 1999). The finance sector performs different roles towards the proper functioning of the economy. The growth and development of companies in an economy is facilitated by the financial sector especially in emerging economies (Mahmoud, 2011). They mobilize savings from the people and sectors with surplus funds and channel them to the sectors where they are needed, facilitate various payments services for goods and services and finance development of business (Turlea, Mocanu and Radu, 2010). In addition, finance companies are characterized by high leverage, opaque operations and tendency of instability (Westman 2009). Furthermore, the need to safeguard the savings of depositors, investments of shareholders and bondholders, maintain the stability of the payment system and reduce risks emphasizes the importance of the stringent regulation of the financial institutions (Merton, 1995).

The recent global financial crisis had an impact on several companies and economies all over the world and the nature of the impact differs from one country to another (Atik, 2009). The benefit of good corporate governance practices in finance firms was re-emphasized by this financial crisis. The crisis began in 2007 and led to the filing for bankruptcies by many financial institutions in different parts of the world especially the West. This made authorities to intervene with various rescue packages to save the troubled companies. This led to the injection of the public funds into such institutions to prevent total collapse of the system. In addition, authorities set up different committees to look into reasons behind such problems and to come out with recommendations that have become laws and regulations to guide the governance of financial institutions (Becht, Bolton and Roell, 2012). The existence of a sound financial system is needed for the attainment of the status of a developed economy (Becht et al, 2012). Such sound financial system mobilizes and allocates funds to various sectors of the economy that helps to lower the cost of capital to the firms, boost capital formation and stimulate productive activities and growth in the economy (Becht et al, 2012). In addition, financial institutions provide maturity transformation by investing very illiquid deposits into risky projects with a long payback period. This function enables the bank to reduce the risk to investors and depositors by polling of resources and diversifying investment portfolio of short-term deposit and long-term investment (Westman, 2009).

Although there are a lot of studies on AC, however, the studies largely focused on developed countries and results of the studies are contradictory. In addition, there are few studies on the impact of MCCG on corporate governance and firm performance and the studies that compared the period before and after the MCCG were issued and revised are few. Therefore, considering the role of the audit committee as the most important subcommittee of the board, this paper examines whether AC attributes have impact on firm performance in both the period before and after the MCCG was revised. Secondly, the paper examines whether the revision to MCCG had impact on AC attributes. The code was initially issued in 2000 after the Asian financial crisis and was revised in 2007 and 2012. The rest of the paper is organized as follows. Section two reviews related literature and develops hypotheses. Section three narrates the research methodology. Section four presents and discusses the findings while section five provides conclusion of the study.

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## II. Literature Review, Theoretical Background and Hypothesis Development

The Malaysian code on corporate governance (revised, 2007, 2012), BMB listing requirements (2007) and the corporate governance guide issued by central bank mandated all listed and licensed companies in Malaysia to form an AC of the board composed of non-executive directors and should comprise not less than three members with a majority of INED. Finance companies were the first companies to have AC in Malaysia which was made a requirement by the central bank in 1985 prior to other public companies (Sori, 2005). The requirement for the establishment of AC for other companies was introduced in 1993 (Yatim, 2009). The development of AC as a subcommittee of the board was given a boost by the Smith report of 2003 in the UK. The AC is to assist the board in discharging its responsibilities with respect to finance and accounting functions. It is responsible to ensure that the internal control function in the company is adequate and that the internal control function is discharged effectively. In addition, the AC is responsible for fair and transparent reporting, ensuring effectiveness of internal and external audit and ensuring that related party transactions are reported (MCCG, 2007). In addition, the AC is responsible for the appointment, resignation, fees and dismissal of the external auditors (MCCG, 207). The major function of audit committee is to monitor financial performance and ensure integrity of financial reporting (Yatim, 2009).The listing requirements of Bursa Malaysia (2007) and the corporate governance guide issued by the central bank requires that audit committee should include at least one member with accounting qualification or accounting experience or finance industry experience. The presence of an expert on the AC is to ensure that the AC performs its monitoring functions effectively (Brown et al., 2011).

Karamanou and Vefeas (2005) documented a positive relationship between audit committee and firm performance. Mangena and Chamisa (2008) found that the existence of audit committee in a company helps to enhance compliance with the regulatory requirements and thereby reduce the possibility of the suspension of the firm from the South African stock exchange. Furthermore, presence of AC in a company was found to be associated with less change in external auditor by companies (Kunitake, 1983) and the appointment of a reputable external auditor as a result of the network of the members of the committee (Kunitake, 1981). Audit committee may be unable to perform the monitoring role effectively due to lack of expertise and time and because of the additional responsibilities imposed on the committee by the regulatory bodies (Yatim, 2009). Through its function which includes meeting with both internal and external auditors, audit committee ensures the release of high quality financial information (Klein, 1998). Aldamen, Duncan, Kelly, McNamara and Nagel (2011), reported that small AC composed of directors with experience and financial expertise and interlock of directors is positively associated with performance based on market measure of performance.

### a) *Agency Theory*

Agency relationship results from the separation of ownership and control which was brought by the industrial revolution that led to the emergence of large organizations and therefore the delegation of responsibility and authority (Jensen and Meckling, 1976; Bhandari, 2010). In addition, agency problem resulting from the self-interest of the managers is more complex in the finance companies as there are multiple interests the company needs to address. The shareholders as the primary principals appoint managers to act as agents to manage the business on their behalf. This separation of ownership and control could lead to the agents taking decisions that are not in the interest of the principal.

### b) *Hypotheses Development*

#### i. *Committee Composition*

The independence of AC members enhances the financial reporting quality and reduces the incidence of restatement (Abott, Parker and Peters, 2004). Independence of the AC members enhances monitoring due to the absence of any association between committee members and the management and because the directors will monitor effectively the activities of management in order to protect their image and enhance their chances of getting further appointments (Carcello and Neal, 2003). Furthermore, the independence of AC enhances the effectiveness of the committee in monitoring by improving internal control and by providing internal audit with an opportunity to communicate to a committee composed of independent directors (Raghunandan, Read and Rama, 2001). Abott, Peters and Raghunandan (2003) reported that independent AC is associated with greater scope of work of the external auditor which could help to detect fraudulent practices. Lam (1975) found that management and auditor are more honest in reporting when there is AC of independent directors. Beasley (1996) found the presence of independent AC to be negatively related with financial statement fraud. Klein (2002) reported that AC with a majority of non-independent directors is associated with increase in abnormal accruals, implying that AC composed of mainly INED is more effective in monitoring financial reporting and related functions. The independence of AC improves the powers of the committee and reduces agency problem and chances for expropriation by insiders (Yeh, Chung and Liu, 2011). Although active AC composed of INED enhances performance through enhanced monitoring and by providing independent channel for the external and internal auditors to communicate any issues, some prior studies have shown that independence of AC does not enhance independence of the external auditor (Gul, 1989) while mixed results were reported by Cottel and Rankin (1988). Therefore our fist hypothesis is stated as follows:

*H1 There is a significant relationship between audit committee composed of independent directors and firm performance.*

ii. *Independent Committee Chair*

Woidtke and Yeh (2013) reported that audit committee composed of mainly independent directors and the presence of an independent chair enhances the quality of financial reporting. Akhigbe and Martin (2006) reported that independent AC chair enhances quality of reported financial result and fraudulent financial reporting is reduced when there is independent chair. In addition, better monitoring of accounting and financial reporting activities of the company will be ensured when committee chair is independent (Tao and Hutchinson, 2012). Although committee chair enhances committee independence, such independence may not bring the desired improvement in enhancing the effectiveness of the committee in monitoring the activities of management if the CEO is involved in the directors' selection (Cacello et al., 2011). They further added that independence of the committee chair alone will not enhance the confidence of the investors in the companies' financial statement but the presence of independent directors in addition to independence of the committee chair will ensure that the market has confidence in the reported figures of companies especially where the ownership is concentrated. Thus we hypothesized as follows;

*H2 There is a significant relationship between independent chair of audit committee and firm performance.*

iii. *Expert Directors*

The need for the presence of expert directors on the AC was emphasized as a result of the recent financial crisis and the previous corporate scandals (Güner, Malmendier and Tate, 2008). Davidson, Xie and Xu (2004) report that market valuation of a firm is positively related with appointment of a director with finance expertise on AC. Ghafran and Sulliva (2012) found that investors value the presence of AC and they perceive the appointment of expert director on AC positively. According to Dickins, Hillson and Platau (2009) the reliability of the financial statement of a company to analysts is enhanced when the AC has a member with financial expertise. This is the case because the presence of finance expert will enhance the quality of the financial report. Krishnan and Visvanathan found that expert directors on audit committee reduce the audit fees charge by the external auditors. Therefore we hypothesized as follows:

*H3 There is a significant relationship between audit committees' expertise and firm performance.*

iv. *Executive Experience*

Evidence from prior studies has shown a positive relationship between AC composed of directors with prior experience and firm valuation (Aldamen et al., 2011). The industry experience of directors may be more beneficial to a small finance company in its early stage of development since the directors could serve '*as a resource to management'*, by providing a link to outside resources such as contacts and connections. While an established company at the declining stage of its development and with dispersed shareholdings may benefit more from directors with technical or financial expertise who will concentrate on monitoring of the company (Carcello et al., 2011, p. 22). Thus, the following hypothesis was tested;

*H4 There is significant relationship between presence of NED with executive experience on audit committee and firm performance.*

v. *Executive Membership*

The presence of executive directors on board committees will reduce information asymmetry between the executive and non-executive directors and provide the committees with valuable and high quality inside information which could be difficult to obtain by outsiders (Aguilera et al., 2011). On the other hand, the presence of executive especially the CEO and CFO on AC could hinder the effective functioning of the committee with regards to financial reporting activities (Carcello, 2011). Since the CEO and CFO were involved in most of the prior accounting frauds (Beasley, Carcello, Hermanson and Neal, 2010) their presence on the committee could mean a weak control environment and the need for more vigilance by the external auditor (Carcello, 2011). Therefore our fifth hypothesis is stated as follows:

*H5 There is a significant relationship between membership of executive on audit subcommittee and firm performance.*

vi. *Interlock of Directors*

The multiple membership of directors on subcommittees reduces information asymmetry, enhances coordination and communication among the subcommittees (Jensen and Meckling, 1976). Hou and Wang (2013) found that interlock of directors enable directors to provide more effective monitoring of the executive due to their reputation and expertise which they gained from serving on different committees. Interlock of directors on board subcommittees will enhance the coordination and communication among subcommittees in a firm thereby reducing the chances of decisions that will contradict each other and ultimately enhance performance (Tao & Hutchinson, 2012). Therefore multiple memberships on committees by directors' especially monitoring committees will result in better performance through more efficient coordination of the appointments, compensation package, risk level and the monitoring of financial reporting process (Laux and Laux, 2009). Hoitash and Hoitash (2009) on the other hand found negative impact of interlock of directors on firm performance. Therefore our last hypothesis is as follows:

*H6 There is a significant relationship between dual membership of directors on audit and other monitoring committees and firm performance.*

## III. Methodology

The sample comprise of all finance companies listed on the finance sector of the main board of Bursa Malaysia which consist of 37 companies spread across the various segments of the finance sector. The observation period covers 2004 to 2006 for the period before revision while the period after the revision comprise of year 2009 to 2011. The study used secondary data that was collected from the annual report of the companies available from the website of Bursa Malaysia or the company's website. In addition to the annual reports, financial information about the companies was obtained from Bloomberg data source. The annual report was used to obtain information on corporate governance variables while information on the dependent variable and control variables was obtained from financial information available from Bloomberg database. Multiple regression analysis was used to analyze the relationship between the dependent and independent variables. Specifically, the study was operated based on the following research model;

$$Fp_{it} = \alpha + \beta_1 INED_{it} + \beta_2 CINED_{it} + \beta_3 FE_{it} + \beta_4 EE_{it} + \beta_5 EP_{it} + \beta_6 AC\_RMC_{it} + \beta_7 AC\_RC_{it} + \beta_8 AC\_NC_{it} + \beta_9 FS_{it} + \beta_{10} LEV_{it} + YD_{it} + \varepsilon_{it} \quad (1)$$

The variables in the research model were measured as follow:

Firm Performance= returns on assets (ROA) and Tobin's Q.

INED= proportion of independent directors to total number of directors on the committee

CINED= dummy variable of one if subcommittee chair is independent director zero otherwise

FE= proportion of directors with accounting qualification or finance industry experience on the subcommittee

EE= proportion of directors with executive experience on the subcommittee

EP= proportion of executive on the committee

AC_RMC= proportion of directors on both audit and risk subcommittee to total number of directors on the audit subcommittees

AC_RC= proportion of directors on both audit and remuneration subcommittee to total number of directors on the audit subcommittees

AC_NC= proportion of directors with dual membership of audit and nomination subcommittee to total number of directors on the audit subcommittee

FS = Log of total assets

LEV= Ratio of total debt to equities

## IV. Empirical Results and Discussion

### a) *Descriptive Statistics*

The result of the descriptive statistics was used to test the assumptions of regression analysis. As indicated by the skewness and kurtosis values, the data for all the variables under the model are normally distributed since the skewness and kurtosis values are within the ±3.00 and ±10.00 range. In addition, the group normality test was performed and the values obtained are 0.823 and 3.232 for skewness and kurtosis respectively which indicates that the data is normally distributed. The result from the Q-Q plot indicates that the assumption of linearity is fulfilled since the Q-Q plot indicates that the values fall within ±3.00 threshold. The result indicates that there are companies with AC composed of 100% independent directors while some have no independent director and an average of 69% and 83% for the period before and after the revised code respectively. This indicates that more independent directors are appointed to AC after the revised MCCG was issued. The proportion of AC chaired by an independent director has also increased from 94% before the revised code to 98% after the revised code. This indicates that the revision of the code has made an impact on the composition of the AC. The result also indicates that more directors with expertise are appointed to AC as shown by the increase from a maximum of 75% to 100% with an average of 32% and 42% for the period before and after the revision respectively.

*Table 1 :* Descriptive statistics for the period before the revision to MCCG

| | CC | CINED | FE | EE | EP | AC/RMC | AC/RC | AC/NC |
|---|---|---|---|---|---|---|---|---|
| Mean | 0.696 | 0.945 | 0.320 | 0.298 | 0.115 | 0.204 | 0.512 | 0.574 |
| Median | 0.667 | 1.000 | 0.333 | 0.333 | 0.00 | 0.000 | 0.666 | 0.666 |
| Maximum | 1.00 | 1.00 | 0.750 | 0.800 | 0.333 | 1.000 | 1.000 | 1.000 |
| Minimum | 0.00 | 0.00 | 0.00 | 0.000 | 0.000 | 0.000 | 0.00 | 0.00 |
| Std. Dev. | 0.210 | 0.227 | 0.237 | 0.247 | 0.151 | 0.339 | 0.341 | 0.351 |
| Skewness | -1.474 | -3.944 | 0.193 | 0.306 | 0.590 | 1.392 | -0.228 | -0.538 |
| Kurtosis | 7.324 | 16.55 | 1.996 | 2.067 | 1.435 | 3.483 | 1.867 | 2.109 |
| OBS. | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 |

*NOTE: ROA=return on assets measured as EBIT divided by total assets, CC=committee composition defined as the proportion of Independent directors to total number of directors on AC, CINED=chair independent non-executive director defined as a dummy variable that takes one if committee chair is independent zero otherwise, FE=finance expertise measured as the number of directors with accounting expertise or finance industry experience divided by the total number of directors on AC, EE=executive experience measured as the number of directors with executive experience divided by the total number of directors on AC, EP=membership of executive defined as the number of executive directors on AC divided by total number of directors on AC, A/RC=audit/remuneration committee interlock, A/RMC=audit/risk committee interlock, A/NC=audit/nomination committee interlock, interlock is defined as the number of directors on AC and other monitoring committee divided by total number of directors on AC, FS=firm size (log of total assets), LEV=leverage measured as total debt divided by equity.*

The percentage of directors with executive experience on AC has changed from a maximum of 80% to 100%, a minimum of zero and an average of 29% and 27% for the period before and after the revision. Although based on the average for the two periods there is decrease, there is an increase in case of the maximum percentage in the period after compared to the period before the revision. In addition, less number of executive directors are appointed to AC this is indicated by an average of 11% in the period before to one percent in the period after the revision as recommended by the revised code. The proportion of directors with dual membership on AC and other subcommittees ranges from a minimum of zero to a maximum of 100% for both periods. In case of interlock of directors on AC and risk management committee, the average has increased from 20% to 26% for the period before and after respectively. The average for AC and remuneration committee interlock has also increased from 51% to 55% while average for AC and nomination committee interlock has increased from 57% to 66% for the period before and after the revision respectively.

*Table 2 :* Descriptive statistics for the period after the revision to MCCG

| | INED | CINED | FE | EE | EP | A_M | A_C | A_N |
|---|---|---|---|---|---|---|---|---|
| Mean | 0.8340 | 0.981 | 0.423 | 0.272 | 0.012 | 0.269 | 0.551 | 0.663 |
| Median | 0.8333 | 1.00 | 0.333 | 0.250 | 0.00 | 0.00 | 0.600 | 0.666 |
| Maximum | 1.00 | 1.00 | 1.00 | 1.00 | 0.333 | 1.00 | 1.00 | 1.00 |
| Minimum | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Std. Dev. | 0.1963 | 0.133 | 0.246 | 0.283 | 0.062 | 0.366 | 0.319 | 0.335 |
| Skewness | -1.4303 | 7.246 | 0.126 | 0.695 | 4.978 | 0.933 | -0.205 | -0.689 |
| Kurtosis | 6.6231 | 53.51 | 2.568 | 2.446 | 25.78 | 2.333 | 2.072 | 2.372 |
| Obs. | 111 | 111 | 111 | 111 | 111 | 111 | 111 | 111 |

The result of correlation analysis indicates no collinearity between the predictor variables since none of the bivariate correlation exceeds 0.7.Therefore, there is no multicollinearity problem. The heteroskedasticity test also indicates that the null hypothesis of no heteroskedasticity is rejected indicating the presence of heteroskedasticity problem in the model. White's heteroskedasticity-consistent standard error was used to correct the heteroskedasticity problem. Autocorrelation was corrected by using the white diagonal method.

*b) Multiple Regression Analysis for the Period Before and After Revision to MCCG Based on ROA*

The result of the Hausman's test presented in table three indicates that REM is suitable for the period before while FEM is appropriate for the period after. The adjusted $R^2$ (0.0199 and0.7969) based on ROA for both periods indicates that the independent variables explain approximately two percent and 80% of the variation in ROA. The f-statistics is 1.1867 for the period before and 9.9940 for the period after. The corresponding p-value is highly significant or lower than the alpha value of 0.05 in case of the period after while it is insignificant for the

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period before the revision and the crisis. In terms of the individual predictor variables none of the variables is significantly related with ROA in the period after the revision while executive experience is significant ($p<0.1$) and positive and firm size is significant ($p<0.01$) and negatively related with ROA in the period before the revised code.

*Table 3 :* Multiple regression for the period before and after the revision

| | Period before | Period after |
|---|---|---|
| Constant | 0.0634(3.5417)*** | 2.3257(1.6973)* |
| Composition | 0.0044(0.2236) | -0.1725(-0.0839) |
| INED | -0.0014(-0.4530) | -1.1864(-0.4509) |
| Finance expertise | -0.0120(-0.7489) | 0.9509(0.5965) |
| Executive experience | 0.0259(1.6625)* | 0.2776(0.1759) |
| Executive membership | -0.0079(-0.2791) | -0.3221(-0.0451) |
| Firm size | -1.1128(-2.5333)*** | -0.3802(-0.3787) |
| Leverage | 0.0193(1.4145) | 1.0030(0.5247) |
| A_RMC | 0.0245(1.8554)* | 0.3952(0.2479) |
| A_RC | 0.0159(1.2590) | 21.096(1.2818) |
| A_NC | -0.0183(-1.4608) | -4.3247(-0.8308) |
| Year dummies | -0.0059(-1.1865) | -0.0501(-0.1658) |
| Year dummies | -0.0037(-0.7307) | -0.0422(-0.1374) |
| $R^2$ | 0.126877 | 0.885549 |
| Adj. $R^2$ | 0.019964 | 0.796941 |
| F-statistics | 1.186736 | 9.994061*** |
| Durbin-Watson stat | 1.608559 | 3.253233 |

*NOTE: ***, **, * indicates significant at 1%, 5% and 10% respectively. The definition of the variables has been given in the table presented earlier.*

c) *Multivariate Regression Analysis for the Period Before and After Revision to MCCG Based on Tobin's Q*

As indicated by the result, the adjusted $R^2$ obtained is approximately 46% and 2% for the period before and after the revision and the financial crisis. The f-statistics obtained is 2.9409 and 1.1291 while it is significant at one percent in the period before, it is insignificant in the period after the revision. In terms of the individual variables, dual membership of directors on AC and risk committee is significant and negatively related with Tobin's Q at five percent level in the period before the revision. The negative direction of result is contrary to agency theory which suggests that interlock of directors on subcommittees will reduce information asymmetry among the directors about the activities of various committees thereby enhancing coordination among the committees and their activities. The negative sign is however in line with findings by Hoitash and Hoitash (2009) who argued that interlock of directors on committee will create conflict as a result of the conflict in objectives of the committees. The remaining variables are statistically insignificant.

*Table 4 :* Multivariate regression for the period before and after the revision of MCCG based on Tobin's Q

| | Period before | Period after |
|---|---|---|
| Constant | 0.007855(3.211020)*** | 0.009211(2.821944)*** |
| Composition | 0.001744(0.779707) | 0.003927(1.126581) |
| INED | -0.000102(-0.251324) | -0.006398(-1.489284) |
| Finance expertise | -0.003075(-1.418343) | 4.87E-05(0.020639) |
| Executive experience | 0.001115(0.487080) | 0.000980(0.410375) |

| | | |
|---|---|---|
| Executive membership | 0.001265(0.262989) | -0.003021(-0.355816) |
| Firm size | 0.055403(0.915813) | 0.000422(0.204457) |
| Leverage | 0.001113(0.546259) | 0.001175(0.628306) |
| A_RMC | -0.004644(-2.239421)** | 0.000681(0.296505) |
| A_RC | -0.001498(-0.951260) | 0.034819(0.937889) |
| A_NC | 0.000561(0.380899) | -0.023419(-2.524480)*** |
| Year dummy | -0.000827(-1.826424)* | 0.000483(0.588140) |
| Year dummy | -8.18E-05(-0.168866) | 0.001294(1.567675) |
| $R^2$ | 0.694830 | 0.134762 |
| Adj. $R^2$ | 0.458570 | 0.015418 |
| F-statistics | 2.940952*** | 1.129193 |
| Durbin-Watson stat | 2.143050 | 1.812205 |

*NOTE: ***, **, * indicates significant at 1%, 5% and 10% respectively. The definition of the variables has been presented in the earlier tables.*

## V. Conclusion

Using a sample of 37 listed finance companies, this paper investigates the impact of audit committee attributes on firm performance based on the data for the period before and after the MCCG was revised. The result indicates that interlock of directors on audit and risk committee influence market valuation of firms negatively. The result is contrary to agency theory which suggests that separating directors on committees will create information asymmetry between the directors and lead to poor coordination in the decisions of the committees thereby negatively affecting firm performance. Overall, the result has shown an improvement in the corporate governance of finance companies in the period after the revision when the result for both periods is compared. Therefore, regulators should constantly review the corporate governance code to make it in line with market needs. The result has provided evidence on the impact of revision to MCCG on corporate governance in the finance companies and the impact on the performance of the firms. The study is limited to only listed finance companies and examined only some attributes of the audit committee. Future studies could examine other companies in other sectors or other locations. In addition, future studies could look at committee attributes which were not examined in this study such as personal characteristics of the directors.

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*Appendix A :* Heteroskedasticity test

| | |
|---|---|
| Chi-Sq. statistics | 76.50001 |
| F-statistics | 7.7215 |
| P-value | 0.9033 |
| H0 (null=no heteroskedasticity problem) | Reject |

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# Impact of Firms' Performance on Stock Returns (Evidence from Listed Companies of FTSE-100 Index London, UK)

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*Abstract-* The research is conducted to test the impact of firm performance on stock returns, evidence from the firms listed on FTSE-100 Index, London Stock Exchange over the period 2005 to 2014. In this study the researcher used has five independent variables and one dependent variable. Earnings per share, quick ratio, return on assets, return on equity, and net profit margin is used as independent variables while stock returns is used as dependent variable.

Panel regression analysis method is used for the data analysis. Results shows that net profit margin, return on assets has got significant positive impact on stock returns while earnings per share has got significant negative impact on stock returns. When earnings per share will increase, than all those investors who wants short term gain and conscious for dividend sell their stock in to the market due to which in near future the stock returns of the company will be decrease due to excess supply of stocks, while return on equity and quick ratio shows insignificant impact on stock returns.

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IMPACTOFFIRMSPERFORMANCEONSTOCKRETURNSEVIDENCEFROMLISTEDCOMPANIESOFFTSE100INDEXLONDONUK

*Strictly as per the compliance and regulations of:*

# Impact of Firms' Performance on Stock Returns (Evidence from Listed Companies of FTSE-100 Index London, UK)

Maryyam Anwaar

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## I. Introduction

### a) *Introduction*

In the modern era, stock investments have become one of the various investment options that are quite attractive to foreign and local investors. With definite regulations as well as the ease of access to the stock market, stock as an investment instrument is not only demanded by the top-class investors, but has attracted the interest of small investors too. The motive which drives an investor or a business entity to invest their funds in stocks is the expectation of high rate of return or the acquisition a company.

In a stock market, the factors that influence the stock prices include financial policy, monetary policy, foreign trade policy and other macro-economic factors, financial information and other internal factors. Financial Information is one of the main elements that the investors use in making decisions whether to invest in company's stock or not?

The role of financial reporting is to provide information about the fiscal health and financial performance of the firms. Investors use financial reports for the evaluation the past, current and future potential performance and financial position of a companies.

Followings are the financial statements reported by firms in order to evaluate the position and performance of firms.

- ➢ The Income statement,
- ➢ The Balance sheet &
- ➢ The Cash flow statement.

### b) *Income Statement*

Income statement is one of the financial statements that is used to determine the performance of companies. The income statement reports how much revenue the company generated during a time period, the expenses it incurred and the resulting profits or losses. The basic equation underlying the income statement is:

$$\text{Revenue} - \text{Expenses} = \text{Income}$$

### c) *Balance Sheet*

Balance sheet is that financial statement used that determine the position of the company as at a period. The balance sheet provides information on what a company owns (assets), what it owes (liabilities), and the shareholder ownership interest (equity). The underlying equation of the balance sheet is:

$$\text{Assets} = \text{Liabilities} + \text{Equity}$$

### d) *Cash Flow Statement*

The third major financial statement provided by companies is the cash flow statement. This statement is used to record the cash and cash equivalents entering and leaving company. There are three major elements in the cash flow statement:

- ➢ Cash flow from operating activities,
- ➢ Cash flow from investing activities
- ➢ Cash flow from financing activities.

### e) *Problem statement*

Many researchers have conducted research on the firm performance on stock returns, taking evidence from different countries stock exchanges. Some of the researchers have found significant positive impact and some found that significant negative impact, and some found that insignificant impact of firm performance on

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stock returns by taking two or three independent variables.

So that's why the problem is still present there that what should be the actual impact of firms performance on stock returns. For that purpose the researcher increase the number of variables for in depth and better results.

*f) Research Question*

The research has the following research questions:

1. What is the impact of quick ratio on stock return?
2. What is the impact of earnings per share on stock return?
3. What is the impact of return on assets on stock return?
4. What is the impact of return on equity on stock return?
5. What is the impact of net profit margin on stock return?

*g) Objectives of the Study*

The present study is planned to accomplish the following objectives:

- To investigate the impact of quick ratio on stock return.
- To identify the impact of earnings per share on stock return.
- To analyze the impact of return on assets on stock return.
- To investigate the impact of return on equity on stock return.
- To find out the impact of net profit margin on stock return.

*h) Significance of the Study*

Many researchers conducted the research on impact of firm performance on stock returns; some researchers found negative relationship and some researcher's shows positive relationship. So the confusion is still present there due to which the researcher wants to investigate the actual performance of the companies and its relation to the company stock returns.

Findings of the study are useful for the investors as well as companies who wants to invest in FTSE-100 index. Findings also useful for the Government sectors for collecting more taxes and boost that particular sectors.

## II. Literature View

*a) Literature Review*

Based on literature review there is a plenty of research which intends to enlighten the relationship between capital structure and performance of listed firms.

Fama and French (1993) analyzed stock return average on market risk, company size, finance leverage, stock holders' salary bond value to market value, stock holders' salary and profit to price ratio by regression. The study concluded that market risk and company size have no relationship with stock return average, but stock return average has indirect relationship with financial leverage bond value and has a direct relationship with financial leverage market.

Bagherzadeh, Safania and Roohi (2013) aimed to describe the relationship between current ratio and stock prices of the firms listed on the NSE, India using the cross-sectional correlation technique. The study was conducted over 4 years for the period from 2009 to 2012. The study sample consisted of 317 firms; however, the Financial and Investment companies were excluded from the study. According to Fama & French (1992) the relationship between the value and accounting variable are different for these companies. The Share Prices of the companies has been used as dependent variable of the study, while the current ratio has been used as independent variable. The study results interpreted a multiple coefficients of correlation between Current Ratio based on the year and the variable of share price which equaled to: $R = .036$, $R2 = .001$ and this indicates that Current Ratio could specify .001% of the variable of the share price. The study concluded that there is significant relationship between current ratio and share price.

Hobarth (2006) examined the relationship between financial indicators and firm's performance of listed firms in USA for 19 years period by using 17 financial indicators and three variables to measure firm's performance, namely market performance (stock market value), cash flow performance (dividend per share), and profitability (ROI). The result showed that firms with low book to market ratio, efficient working capital management, low liquidity, more equity and less liabilities, and high retained earnings have high profitability based on ROI. Firms with unqualified opinion from auditor, more liabilities and less equity, low total assets and retained earnings have better cash flow performance (measured by cash dividend). Furthermore, firms with low book to market ratio, efficient working capital management, more equity and less liabilities, low total assets, and high EBIT margin have better market performance (measured by changes in stock price).

Basu (1977) revealed that the information of P/E ratio does not reflect in share prices and investment performance very fast, and generally it seems that stock equation in different profit coefficients has been priced incorrectly compared to another type of pricing and other chances obtained for "abnormal return" which has been provided for the investor.

Manao and Nur (2001) examined the relation between financial ratio and stock returns in Indonesia.

Those companies used as sample for the study were divided into three size categories of small, medium and big, based on total assets. The result shows that PBV and EPS have significant influence on all models.

Menaje (2012) aimed to determine that impact of financial variables on share price of publicly listed firms on the Philippine. For this purpose, he used the Earning per Share (EPS) and Return on Assets (ROA) as independent variables while the Share Price as dependent variable. The study sample consisted of 50 publicly listed firms in the Philippine. The sample set consist financial reports of 2009, which were taken from OSIRIS electronic database. The multiple regression results of the study showed that a strong positive correlation exists between EPS and share price; whereas there exists a weak negative correlation between ROA and share price. Thus, the paper concluded that the chosen model was able to explain the 73% of variation in the Share Prices.

Irungu (2013) explored the impact of the financial performance indicators on the stock prices of the commercial banks in Kenya. The study used the company size (total assets), liabilities and cost to income ratio as independent variables, while market share price is used as dependent variable. The study sample consist 10 commercial banks listed on the Nairobi Stock Exchange (NSE), Kenya for the year 2011. Multiple regression models have been deployed to analyze the impact of the independent variables on the dependent variables. The results concluded that the model is significant.

Umar and Musa (2013) intended to examine the relationship between Earning per share and Stock prices of firms listed Nigerian Stock Exchange (NSE), Nigeria. Linear regression model has been used for the study. The study sample consist a panel data of 140 Nigerian firms over the period from 2005 to 2009. From the results, it was found that there is an insignificant relationship between earning per share (EPS) and stock prices of the firms in Nigeria. Thus, concluded that the earning per share (EPS) has no predictive power for the stock prices. They suggested that the stock prices of Nigerian firms shall not be predicted by the earning per share of the firms.

Jatoi et.al (2014) analyzed the effect of earning per share on market share price. A sample of 13 cement firms listed on Karachi Stock Exchange was selected for the period of 2009 to 2013. The study included market price of shares as dependent variable where earning per share as independent variable. The findings of the study showed that earning per Share (EPS) significantly impact the Market Value of Share.

### b) *Hypothesis of the Study*

Based on above literature review, the researcher formulates the following hypothesis.

$H_{0a}$: There is no significant impact of quick ratio on stock return.

$H_{1a}$: There is significant impact of quick ratio on stock return.

$H_{0b}$: There is no significant impact of return on assets on stock return.

$H_{1b}$: There is significant impact of return on assets on stock return.

$H_{0c}$: There is no significant impact of earnings per share on stock return.

$H_{1c}$: There is significant impact of earnings per share on stock return.

$H_{0d}$: There is no significant impact of Return on equity on stock return.

$H_{1d}$: There is significant impact of return on equity on stock return.

$H_{0e}$: There is no significant impact of net profit margin on stock return.

$H_{1e}$: There is significant impact of net profit margin on stock return.

## III. Research Methodology

### a) *Description of the study*

Research Methodology is the study of methods by which the work plan for the research is obtained. The research is conducted to test the impact of firm performance on stock returns, evidence from the firms listed on FTSE-100 Index, London Stock Exchange from last one decade. This study has five independent variables and one dependent variable.

### b) *Sample Set*

Secondary data was used to empirically investigate the effect of firms' performance on stock returns. A sample size of top 30 firms has been selected from FTSE-100 index of London Stock Exchange for the purpose of exploring the impact of firms' performance on stock returns. The panel data has been collected for the period of 10 years i.e. from 2005 to 2014 in order to ascertain the relationship between financial ratios and stock returns of the firms listed on FTSE-100 index of the London Stock Exchange. List of the firms used in the study is shown on Table 1 in appendix 1.

### c) *Data Collection Methods*

For the data collection, the researcher has used secondary data i.e.; Annual reports of the selected firms listed on FTSE-100 Index, London Stock Exchange and stock price data has been collecting from www.ftse.org.uk .

### d) *Theoretical Framework / Conceptual Framework*

The study uses following variables to investigate the relationship between firms' performance and stock returns.

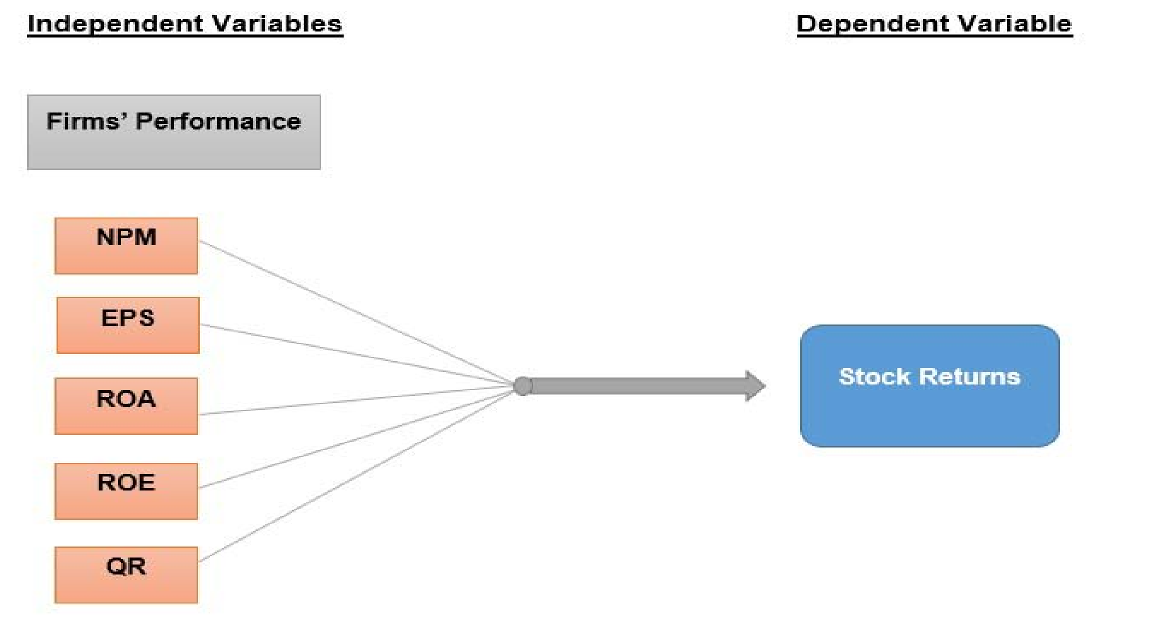


*Figure 1 :* Shows the theoretical framework of the study

i. *Independent Variables*

The current study uses the five measures of performance including Earning per Share (EPS), Return on Assets (ROA), Return on Equity (ROE), Net Profit Margin Ratio (NPM) & Quick Ratio (QR) as Independent Variables.

a. *Earning per share*

Earnings per share are the most important variable used in determination of the share's price. It is also a major component to calculate the price-to-earnings valuation ratio which functions as an indicator of a company's profitability. Menaje (2012) calculate the value of earnings per share by below given formula:

$$\text{Earnings per Share} = \frac{\text{Net income - dividend on preferred stock}}{\text{Average outstanding shares}}$$

b. *Return on Asset*

The ratio of Return on Asset determines how efficient the management is in using its assets to generate revenues. For the study, it is calculated by dividing a company's total annual earnings to its total assets. ROA is presented as a percentage and is also referred to as "return on investment". Menaje (2012) calculate the value of return on assets by below given formula:

$$\text{Return on Assets} = \frac{\text{Net income}}{\text{Total Assets}}$$

c. *Return on equity*

Return on Equity is an indication on how profitable a company is by comparing its net income to its average shareholders' equity. The return on equity ratio (ROE) measures the earnings of the shareholders for their investment in the company. The ROE determines that how effectively investor's money is being employed. The higher the ratio of return on equity, the more efficient the company's management is in employing its equity and the better return is provided to the investors. Wang, Fu & Luo, (2013) calculate the value of return on equity by below given formula:

$$\text{Return on Equity} = \frac{\text{Net income}}{\text{Average Shareholders' Equity}}$$

d. *Net profit margin*

The net profits ratio is the percentage of post-tax and interest profits to sales. It shows how much of the earnings by the company are translated into profits. Muhammad, Shah & Islam (2014) calculate the value of net profit margin by below given formula:

$$\text{Net Profit Margin} = \frac{\text{Net Profit}}{\text{Revenue}}$$

e. *Quick Ratio*

The quick ratio is an indicator of a company's short-term liquidity. It is the measure of a company's capability in meeting its short-term obligations. For this purpose, the quick ratio eliminates inventories from current assets. Muhammad, Shah & Islam (2014) calculate the value of quick ratio by below given formula:

$$\text{Quick ratio} = \frac{(\text{current assets} - \text{inventories})}{\text{Current liabilities}}$$

ii. *Dependent Variables*

Dependent variable means that the variable which derives its value on the basis of another variable, here in my research I use one dependent variable which is stock return.

a. *Stock Returns*

The current study uses Stock Returns as dependent variable in order to analyze the impact of firms' performance.

e) *Regression Analysis*

Regression analysis helps to understand how the value of the dependent variable changes when independent variable is varied. This study uses the following regression models:

$$SR = \beta 0 + \beta\, 1QR + \beta\, 2ROA + \beta\, 3ROE + \beta\, 4NPM + \beta\, 5EPS + e$$

Where:

SR = Stock Returns

β0 = Coefficient of Intercept (Constant)

β1 – β5 = Coefficients of Slop

QR = Quick Ratio

ROA = Return on Assets

ROE = Return on Equity

NPM = Net Profit Margin

EPS = Earnings per Share

e = it is an error term.

## IV. Results and Discussions

a) *Descriptive Statistics*

The descriptive statistics is used as a measure for the analysis of mean, median, maximum, minimum, standard deviation, skewness and kurtosis of the study sample in order to explore the data variation in the firm's listed on the FTSE – 100.

*Table 4.1 :* Shows the values of descriptive statistics between variables

| | EPS | NPM | QR | ROA | ROE | SR |
|---|---|---|---|---|---|---|
| Mean | 0.942400 | 0.169390 | 0.916400 | 0.076247 | 0.315037 | 0.104829 |
| Median | 0.610000 | 0.101400 | 0.770000 | 0.068050 | 0.203800 | 0.059501 |
| Maximum | 10.44000 | 3.779700 | 7.580000 | 0.671100 | 9.850200 | 2.014451 |
| Minimum | -6.160000 | -7.005400 | 0.190000 | -0.535400 | -2.623200 | -0.678218 |
| Std. Dev. | 1.349526 | 0.752726 | 0.728618 | 0.087933 | 0.772560 | 0.333298 |
| Skewness | 1.250682 | -1.962566 | 5.079455 | 0.001604 | 8.115333 | 1.142487 |
| Kurtosis | 14.12182 | 41.53056 | 35.51024 | 21.32121 | 92.65272 | 7.768067 |
| Jarque-Bera | 1624.397 | 18750.13 | 14501.49 | 4195.836 | 103763.1 | 349.4446 |
| Probability | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 | 0.000000 |
| Sum | 282.7200 | 50.81690 | 274.9200 | 22.87400 | 94.51110 | 31.44856 |
| Sum Sq. Dev. | 544.5449 | 169.4125 | 158.7345 | 2.311932 | 178.4578 | 33.21523 |
| Observations | 300 | 300 | 300 | 300 | 300 | 300 |

The above table shows the values of descriptive statistics. The maximum and highest mean values have been observed in case of earning per share, following that, he maximum value of earnings per share is 10.44 and the minimum value is -6.16 while mean value is 0.9424 having standard deviation of 1.3495. The maximum value in case of net profit margin is 3.779 and the minimum value is -7.005 while mean value is 0.1693 having standard deviation of 0.7527. The maximum value in case of quick ratio is 7.580 and the minimum value is 0.190 while mean value is 0.9164 having standard deviation of 0.7286. The maximum value in case of return on assets is 0.6711 and the minimum value is -0.5354 while mean value is 0.0762 having standard deviation of 0.0879. The maximum value in case of return on equity is 9.850 and the minimum value is -2.623 while mean value is 0.3150 having standard deviation of 0.7725. Finally the maximum value in case of stock returns is 2.0144 and the minimum value is -0.6782 while mean value is 0.1048 having standard deviation of 0.3332.

*b) Correlation Analysis*

Correlation means the relationship between two variables. The correlation shows two things, first it shows the direction between two variables and secondly it shows the strength of associations between two variables. The below table shows the values of correlation among the variable

*Table 4.2 :* Shows the values of correlation among variables

| | EPS | NPM | QR | ROA | *ROE* | SR |
|---|---|---|---|---|---|---|
| EPS | 1.000000 | | | | | |
| NPM | 0.426856 | 1.000000 | | | | |
| QR | 0.139965 | -0.043838 | 1.000000 | | | |
| ROA | 0.703676 | 0.428179 | 0.192749 | 1.000000 | | |
| ROE | 0.298253 | 0.087022 | 0.005526 | 0.491299 | 1.000000 | |
| SR | 0.141256 | 0.194969 | 0.108433 | 0.271694 | 0.065772 | 1.000000 |

The highest positive correlation is observed between return on assets and earnings per share, the correlation value of net profit margin and earnings per share is 0.4268, which means that 42.68% positive correlation is present between NPM and EPS. The correlation coefficient of quick ratio and earnings per share is 0.1399, which means that 13.99% positive correlation is present between QR and EPS. The correlation coefficient of return on assets and earnings per share is 0.7036, which means that 70.36% positive correlation is observe between ROA and EPS. The correlation coefficient of return on equity and earnings per share is 0.2982, which means that 29.82% positive correlation is observe between ROE and EPS. The correlation coefficient of stock returns and earnings per share is 0.1412, which means that 14.12% positive correlation is observe between SR and EPS. The correlation coefficient of quick ratio and net profit margin is -0.0438, which means that 4.38% negative correlation is present between QR and NPM, it means that when quick ratio will be increase than net profit margin will be decrease. The correlation coefficient of return on assets and net profit margin is 0.4281, which means that 42.81% positive correlation is observe between ROA and NPM. The correlation coefficient of return on equity and net profit margin is 0.087, which means that 8.7% positive correlation is observe between ROE and NPM. The correlation coefficient of stock returns and net profit margin is 0.1949, which means that 19.49% positive correlation is observe between SR and NPM. The correlation coefficient of return on assets and quick ratio is 0.1927, which means that 19.27% positive correlation is observe between ROA and QR. The correlation coefficient of return on equity and quick ratio is 0.0055, which means that 0.55% positive correlation is observe between ROE and QR. The correlation coefficient of stock returns and quick ratio is 0.1084, which means that 10.84% positive correlation is observe between SR and QR. The correlation coefficient of return on equity and return on assets is 0.4912, which means that 49.12% positive correlation is observe between ROE and ROA. The correlation coefficient of stock returns and return on assets is 0.2716, which means that 27.16% positive correlation is observe between SR and ROA. Finally the correlation coefficient of stock returns and return on equity is 0.0657, which means that 6.57% positive correlation is observe between SR and ROE.

*c) Regression Analysis*

Regression analysis shows that the effect of one variable to another variable. It shows that the variation of dependent variable has been explained by the variation of dependent variable. Panel regression consists of three major effects which are Common Effect, Fixed Effect and Random Effect. For the purpose of selecting appropriate Effect Model for the study, Likelihood Ratio has been tested. The p – value of the cross-section F in the redundant fixed effect test is 0.9932, which shows that Common Effect Model is the best model for the study.

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*Table 4.3 :* Shows the value of likelihood

| Effects Test | Statistic | d.f. | Prob. |
|---|---|---|---|
| Cross-section F | 0.457384 | (29,265) | 0.9932 |
| Cross-section Chi-square | 14.652299 | 29 | 0.9875 |

*Table 4.4 :* Shows the values of common effect model regression analysis

| Variable | Coefficient | Std. Error | t-Statistic | Prob. |
|---|---|---|---|---|
| C | 0.010968 | 0.032016 | 0.342576 | 0.7322 |
| NPM_? | 0.051739 | 0.021582 | 2.397321 | 0.0090 |
| ROA_? | 1.283147 | 0.341418 | 3.758285 | 0.0002 |
| ROE_? | -0.030530 | 0.028036 | -1.088962 | 0.2771 |
| EPS_? | -0.033389 | 0.010257 | -3.255241 | 0.0008 |
| QR_? | 0.030931 | 0.026316 | 1.175373 | 0.2408 |
| R-squared | 0.448339 | Mean dependent var | | 0.104829 |
| Adjusted R-squared | 0.412004 | S.D. dependent var | | 0.333298 |
| S.E. of regression | 0.319166 | Akaike info criterion | | 0.573587 |
| Sum squared resid | 29.94889 | Schwarz criterion | | 0.647663 |
| Log likelihood | -80.03804 | Hannan-Quinn criter. | | 0.603232 |
| F-statistic | 6.412944 | Durbin-Watson stat | | 2.364511 |
| Prob(F-statistic) | 0.000011 | | | |

The coefficient value of net profit margin is 0.05173, which means that 5.17 percent variation of stock returns has been explain by the variation of net profit margin. The t-statistics of net profit margin is 2.3973 with a p- value is $< 0.05$ shows that net profit margin has got significant positive impact on stock returns. If one unit increases in net profit margin than stock returns will increase at 0.05 units. The coefficient value of return on assets is 1.2831, which means that 128.31 percent variation of stock returns has been explain by the variation of return on assets. The t-statistics of return on assets is 3.7582 with a p- value is $< 0.005$ shows that return on assets has got significant positive impact on stock returns. If one unit increases in return on assets than stock returns will increase at 1.283 units. The coefficient value of return on assets is -0.0305, which means that 3.05 percent negative variation of stock returns has been explain by the variation of return on equity. The t-statistics of return on equity is -1.0889 with a p- value is $> 0.05$ shows that return on equity has got insignificant negative impact on stock returns. If one unit increases in return on equity than stock returns will decrease at 0.03 units. The coefficient value of quick ratio is 0.0309, which means that 3.09 percent positive variation of stock returns has been explain by the variation of quick ratio. The t-statistics of quick ratio is 1.1753 with a p- value is $>$ 0.05 shows that quick ratio has got insignificant positive impact on stock returns. If one unit increases in quick ratio than stock returns will increase at 0.030 units.

The values of determination of coefficient R2 is 0.4483, which means that 44.83 percent variation of stock returns has been explain by the variations of all independent variables, which are net profit margin, return on assets, return on equity, quick ratio, and earnings per share.

The value of $AdjR^2$ is 0.4120, shows that if the researcher incorporate more relevant variables than it will adjust R2 at the rate of 41, 20 percent.

Model is found statistically significant ($F = 6.41$, $p < 0.01$); the value of F-statistics is 6.41 and p-value is $<0.05$ shows that the model is good fit for the study.

*d) Summary of Hypothesis testing*

Based on above results the researcher accepts or rejects the following hypothesis.

| | | |
|---|---|---|
| $H_{1a}$ | There is significant impact of quick ratio on stock return. | Rejected |
| $H_{1b}$ | There is significant impact of return on assets on stock return. | Accepted |
| $H_{1c}$ | There is significant impact of earnings per share on stock return. | Accepted |
| $H_{1d}$ | There is significant impact of return on equity on stock return. | Rejected |
| $H_{1e}$ | There is significant impact of net profit margin on stock return. | Accepted |

## V. Conclusion and Recommendation

### a) Conclusion

The research is conducted to test the impact of firm performance on stock returns, evidence from the firms listed on FTSE-100 Index, London Stock Exchange over the period 2005 to 2014. In this study the researcher used has five independent variables and one dependent variable. Earnings per share, quick ratio, return on assets, return on equity, and net profit margin is used as independent variables while stock returns is used as dependent variable.

Results shows that net profit margin, return on assets has got significant positive impact on stock returns while earnings per share has got significant negative impact on stock returns. The reason for that is when net profit margin is increase and the company will retained more cash than it will automatically increase stock returns and if the company net profit will increase it will increase return on assets which will also increase stock returns. When earnings per share will increase, than all those investors who wants short term gain and conscious for dividend sell their stock in to the market due to which in near future the stock returns of the company will be decrease due to excess supply of stocks, while return on equity and quick ratio shows insignificant impact on stock returns.

### b) Recommendation

The researcher has conducted the research on the firm performance on stock returns evidence from FTSE-100 index over the period of 2005-2014 by using five independent and one dependent variable. If anyone else wants to conduct the research on the same topic than the researcher must incorporate:

- The researcher must incorporate more independent variables
- The period of the study should be more than 20 years for better results
- The researcher must collect the data more the 50 companies for better results

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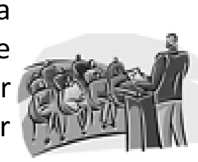

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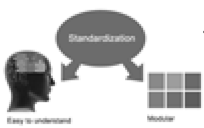


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MARSB accrediting is an honor. It authenticates your research activities. After becoming MARSB, you can add 'MARSB' title with your name as you use this recognition as additional suffix to your status. This will definitely enhance and add more value and repute to your name. You may use it on your professional Counseling Materials such as CV, Resume, Visiting Card and Name Plate etc.

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The IFOARS institution is entitled to form a Board comprised of one Chairperson and three to five board members preferably from different streams. The Board will be recognized as “Institutional Board of Open Association of Research Society”-(IBOARS).

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The Board is at liberty to appoint a peer reviewer with the approval of chairperson after consulting us.
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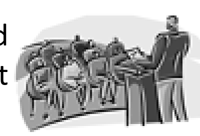

The Global Journals Incorporation (USA) at its discretion can also refer double blind peer reviewed paper at their end to the board for the verification and to get recommendation for final stage of acceptance of publication.

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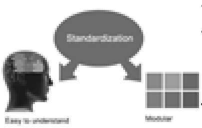


After nomination of your institution as "Institutional Fellow" and constantly functioning successfully for one year, we can consider giving recognition to your institute to function as Regional/Zonal office on our behalf.
The board can also take up the additional allied activities for betterment after our consultation.

**The following entitlements are applicable to individual Fellows:**

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**Note :**

"

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- In case, the chairperson needs to be replaced then consent of 2/3rd board members are required and they are also required to jointly pass the resolution copy of which should be sent to us. In such case, it will be compulsory to obtain our approval before replacement.
- In case of "Difference of Opinion [if any]" among the Board members, our decision will be final and binding to everyone.

"

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3. Submission of Manuscripts,

4. Manuscript’s Category,

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- It may take the discovery of only one relevant paper to let steer in the right keyword direction because in most databases, the keywords under which a research paper is abstracted are listed with the paper.
- One should avoid outdated words.

Keywords are the key that opens a door to research work sources. Keyword searching is an art in which researcher's skills are bound to improve with experience and time.

Numerical Methods: Numerical methods used should be clear and, where appropriate, supported by references.

*Acknowledgements: Please make these as concise as possible.*

References

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## TECHNIQUES FOR WRITING A GOOD QUALITY RESEARCH PAPER:

**1. Choosing the topic:** In most cases, the topic is searched by the interest of author but it can be also suggested by the guides. You can have several topics and then you can judge that in which topic or subject you are finding yourself most comfortable. This can be done by asking several questions to yourself, like Will I be able to carry our search in this area? Will I find all necessary recourses to accomplish the search? Will I be able to find all information in this field area? If the answer of these types of questions will be "Yes" then you can choose that topic. In most of the cases, you may have to conduct the surveys and have to visit several places because this field is related to Computer Science and Information Technology. Also, you may have to do a lot of work to find all rise and falls regarding the various data of that subject. Sometimes, detailed information plays a vital role, instead of short information.

**2. Evaluators are human:** First thing to remember that evaluators are also human being. They are not only meant for rejecting a paper. They are here to evaluate your paper. So, present your Best.

**3. Think Like Evaluators:** If you are in a confusion or getting demotivated that your paper will be accepted by evaluators or not, then think and try to evaluate your paper like an Evaluator. Try to understand that what an evaluator wants in your research paper and automatically you will have your answer.

**4. Make blueprints of paper:** The outline is the plan or framework that will help you to arrange your thoughts. It will make your paper logical. But remember that all points of your outline must be related to the topic you have chosen.

**5. Ask your Guides:** If you are having any difficulty in your research, then do not hesitate to share your difficulty to your guide (if you have any). They will surely help you out and resolve your doubts. If you can't clarify what exactly you require for your work then ask the supervisor to help you with the alternative. He might also provide you the list of essential readings.

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**10. Bookmarks are useful:** When you read any book or magazine, you generally use bookmarks, right! It is a good habit, which helps to not to lose your continuity. You should always use bookmarks while searching on Internet also, which will make your search easier.

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**12. Make all efforts:** Make all efforts to mention what you are going to write in your paper. That means always have a good start. Try to mention everything in introduction, that what is the need of a particular research paper. Polish your work by good skill of writing and always give an evaluator, what he wants.

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**15. Use of direct quotes:** When you do research relevant to literature, history or current affairs then use of quotes become essential but if study is relevant to science then use of quotes is not preferable.

**16. Use proper verb tense:** Use proper verb tenses in your paper. Use past tense, to present those events that happened. Use present tense to indicate events that are going on. Use future tense to indicate future happening events. Use of improper and wrong tenses will confuse the evaluator. Avoid the sentences that are incomplete.

**17. Never use online paper:** If you are getting any paper on Internet, then never use it as your research paper because it might be possible that evaluator has already seen it or maybe it is outdated version.

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**20. Use good quality grammar:** Always use a good quality grammar and use words that will throw positive impact on evaluator. Use of good quality grammar does not mean to use tough words, that for each word the evaluator has to go through dictionary. Do not start sentence with a conjunction. Do not fragment sentences. Eliminate one-word sentences. Ignore passive voice. Do not ever use a big word when a diminutive one would suffice. Verbs have to be in agreement with their subjects. Prepositions are not expressions to finish sentences with. It is incorrect to ever divide an infinitive. Avoid clichés like the disease. Also, always shun irritating alliteration. Use language that is simple and straight forward. put together a neat summary.

**21. Arrangement of information:** Each section of the main body should start with an opening sentence and there should be a changeover at the end of the section. Give only valid and powerful arguments to your topic. You may also maintain your arguments with records.

**22. Never start in last minute:** Always start at right time and give enough time to research work. Leaving everything to the last minute will degrade your paper and spoil your work.

**23. Multitasking in research is not good:** Doing several things at the same time proves bad habit in case of research activity. Research is an area, where everything has a particular time slot. Divide your research work in parts and do particular part in particular time slot.

**24. Never copy others' work:** Never copy others' work and give it your name because if evaluator has seen it anywhere you will be in trouble.

**25. Take proper rest and food:** No matter how many hours you spend for your research activity, if you are not taking care of your health then all your efforts will be in vain. For a quality research, study is must, and this can be done by taking proper rest and food.

**26. Go for seminars:** Attend seminars if the topic is relevant to your research area. Utilize all your resources.

**27. Refresh your mind after intervals:** Try to give rest to your mind by listening to soft music or by sleeping in intervals. This will also improve your memory.

**28. Make colleagues:** Always try to make colleagues. No matter how sharper or intelligent you are, if you make colleagues you can have several ideas, which will be helpful for your research.

**29. Think technically:** Always think technically. If anything happens, then search its reasons, its benefits, and demerits.

**30. Think and then print:** When you will go to print your paper, notice that tables are not be split, headings are not detached from their descriptions, and page sequence is maintained.

**31. Adding unnecessary information:** Do not add unnecessary information, like, I have used MS Excel to draw graph. Do not add irrelevant and inappropriate material. These all will create superfluous. Foreign terminology and phrases are not apropos. One should NEVER take a broad view. Analogy in script is like feathers on a snake. Not at all use a large word when a very small one would be sufficient. Use words properly, regardless of how others use them. Remove quotations. Puns are for kids, not grunt readers. Amplification is a billion times of inferior quality than sarcasm.

**32. Never oversimplify everything:** To add material in your research paper, never go for oversimplification. This will definitely irritate the evaluator. Be more or less specific. Also too, by no means, ever use rhythmic redundancies. Contractions aren't essential and shouldn't be there used. Comparisons are as terrible as clichés. Give up ampersands and abbreviations, and so on. Remove commas, that are, not necessary. Parenthetical words however should be together with this in commas. Understatement is all the time the complete best way to put onward earth-shaking thoughts. Give a detailed literary review.

**33. Report concluded results:** Use concluded results. From raw data, filter the results and then conclude your studies based on measurements and observations taken. Significant figures and appropriate number of decimal places should be used. Parenthetical remarks are prohibitive. Proofread carefully at final stage. In the end give outline to your arguments. Spot out perspectives of further study of this subject. Justify your conclusion by at the bottom of them with sufficient justifications and examples.

**34. After conclusion:** Once you have concluded your research, the next most important step is to present your findings. Presentation is extremely important as it is the definite medium though which your research is going to be in print to the rest of the crowd. Care should be taken to categorize your thoughts well and present them in a logical and neat manner. A good quality research paper format is essential because it serves to highlight your research paper and bring to light all necessary aspects in your research.

## Informal Guidelines of Research Paper Writing

**Key points to remember:**

- Submit all work in its final form.
- Write your paper in the form, which is presented in the guidelines using the template.
- Please note the criterion for grading the final paper by peer-reviewers.

**Final Points:**

A purpose of organizing a research paper is to let people to interpret your effort selectively. The journal requires the following sections, submitted in the order listed, each section to start on a new page.

The introduction will be compiled from reference matter and will reflect the design processes or outline of basis that direct you to make study. As you will carry out the process of study, the method and process section will be constructed as like that. The result segment will show related statistics in nearly sequential order and will direct the reviewers next to the similar intellectual paths throughout the data that you took to carry out your study. The discussion section will provide understanding of the data and projections as to the implication of the results. The use of good quality references all through the paper will give the effort trustworthiness by representing an alertness of prior workings.

Writing a research paper is not an easy job no matter how trouble-free the actual research or concept. Practice, excellent preparation, and controlled record keeping are the only means to make straightforward the progression.

**General style:**

Specific editorial column necessities for compliance of a manuscript will always take over from directions in these general guidelines.

To make a paper clear

· Adhere to recommended page limits

Mistakes to evade

- Insertion a title at the foot of a page with the subsequent text on the next page
- Separating a table/chart or figure - impound each figure/table to a single page
- Submitting a manuscript with pages out of sequence

In every sections of your document

· Use standard writing style including articles ("a", "the," etc.)

· Keep on paying attention on the research topic of the paper

· Use paragraphs to split each significant point (excluding for the abstract)

· Align the primary line of each section

· Present your points in sound order

· Use present tense to report well accepted

· Use past tense to describe specific results

· Shun familiar wording, don't address the reviewer directly, and don't use slang, slang language, or superlatives

· Shun use of extra pictures - include only those figures essential to presenting results

**Title Page:**

Choose a revealing title. It should be short. It should not have non-standard acronyms or abbreviations. It should not exceed two printed lines. It should include the name(s) and address (es) of all authors.

**Abstract:**

The summary should be two hundred words or less. It should briefly and clearly explain the key findings reported in the manuscript--must have precise statistics. It should not have abnormal acronyms or abbreviations. It should be logical in itself. Shun citing references at this point.

An abstract is a brief distinct paragraph summary of finished work or work in development. In a minute or less a reviewer can be taught the foundation behind the study, common approach to the problem, relevant results, and significant conclusions or new questions.

Write your summary when your paper is completed because how can you write the summary of anything which is not yet written? Wealth of terminology is very essential in abstract. Yet, use comprehensive sentences and do not let go readability for briefness. You can maintain it succinct by phrasing sentences so that they provide more than lone rationale. The author can at this moment go straight to shortening the outcome. Sum up the study, with the subsequent elements in any summary. Try to maintain the initial two items to no more than one ruling each.

- Reason of the study - theory, overall issue, purpose
- Fundamental goal
- To the point depiction of the research
- Consequences, including definite statistics - if the consequences are quantitative in nature, account quantitative data; results of any numerical analysis should be reported
- Significant conclusions or questions that track from the research(es)

Approach:

- Single section, and succinct
- As a outline of job done, it is always written in past tense
- A conceptual should situate on its own, and not submit to any other part of the paper such as a form or table
- Center on shortening results - bound background information to a verdict or two, if completely necessary
- What you account in an conceptual must be regular with what you reported in the manuscript
- Exact spelling, clearness of sentences and phrases, and appropriate reporting of quantities (proper units, important statistics) are just as significant in an abstract as they are anywhere else

**Introduction:**

The **Introduction** should "introduce" the manuscript. The reviewer should be presented with sufficient background information to be capable to comprehend and calculate the purpose of your study without having to submit to other works. The basis for the study should be offered. Give most important references but shun difficult to make a comprehensive appraisal of the topic. In the introduction, describe the problem visibly. If the problem is not acknowledged in a logical, reasonable way, the reviewer will have no attention in your result. Speak in common terms about techniques used to explain the problem, if needed, but do not present any particulars about the protocols here. Following approach can create a valuable beginning:

- Explain the value (significance) of the study
- Shield the model - why did you employ this particular system or method? What is its compensation? You strength remark on its appropriateness from a abstract point of vision as well as point out sensible reasons for using it.
- Present a justification. Status your particular theory (es) or aim(s), and describe the logic that led you to choose them.
- Very for a short time explain the tentative propose and how it skilled the declared objectives.

Approach:

- Use past tense except for when referring to recognized facts. After all, the manuscript will be submitted after the entire job is done.
- Sort out your thoughts; manufacture one key point with every section. If you make the four points listed above, you will need a least of four paragraphs.

- Present surroundings information only as desirable in order hold up a situation. The reviewer does not desire to read the whole thing you know about a topic.
- Shape the theory/purpose specifically - do not take a broad view.
- As always, give awareness to spelling, simplicity and correctness of sentences and phrases.

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This part is supposed to be the easiest to carve if you have good skills. A sound written Procedures segment allows a capable scientist to replacement your results. Present precise information about your supplies. The suppliers and clarity of reagents can be helpful bits of information. Present methods in sequential order but linked methodologies can be grouped as a segment. Be concise when relating the protocols. Attempt for the least amount of information that would permit another capable scientist to spare your outcome but be cautious that vital information is integrated. The use of subheadings is suggested and ought to be synchronized with the results section. When a technique is used that has been well described in another object, mention the specific item describing a way but draw the basic principle while stating the situation. The purpose is to text all particular resources and broad procedures, so that another person may use some or all of the methods in one more study or referee the scientific value of your work. It is not to be a step by step report of the whole thing you did, nor is a methods section a set of orders.

Materials:

- Explain materials individually only if the study is so complex that it saves liberty this way.
- Embrace particular materials, and any tools or provisions that are not frequently found in laboratories.
- Do not take in frequently found.
- If use of a definite type of tools.
- Materials may be reported in a part section or else they may be recognized along with your measures.

Methods:

- Report the method (not particulars of each process that engaged the same methodology)
- Describe the method entirely
- To be succinct, present methods under headings dedicated to specific dealings or groups of measures
- Simplify - details how procedures were completed not how they were exclusively performed on a particular day.
- If well known procedures were used, account the procedure by name, possibly with reference, and that's all.

Approach:

- It is embarrassed or not possible to use vigorous voice when documenting methods with no using first person, which would focus the reviewer's interest on the researcher rather than the job. As a result when script up the methods most authors use third person passive voice.
- Use standard style in this and in every other part of the paper - avoid familiar lists, and use full sentences.

What to keep away from

- Resources and methods are not a set of information.
- Skip all descriptive information and surroundings - save it for the argument.
- Leave out information that is immaterial to a third party.

**Results:**

The principle of a results segment is to present and demonstrate your conclusion. Create this part a entirely objective details of the outcome, and save all understanding for the discussion.

The page length of this segment is set by the sum and types of data to be reported. Carry on to be to the point, by means of statistics and tables, if suitable, to present consequences most efficiently.You must obviously differentiate material that would usually be incorporated in a study editorial from any unprocessed data or additional appendix matter that would not be available. In fact, such matter should not be submitted at all except requested by the instructor.

Content

- Sum up your conclusion in text and demonstrate them, if suitable, with figures and tables.
- In manuscript, explain each of your consequences, point the reader to remarks that are most appropriate.
- Present a background, such as by describing the question that was addressed by creation an exacting study.
- Explain results of control experiments and comprise remarks that are not accessible in a prescribed figure or table, if appropriate.
- Examine your data, then prepare the analyzed (transformed) data in the form of a figure (graph), table, or in manuscript form.

What to stay away from

- Do not discuss or infer your outcome, report surroundings information, or try to explain anything.
- Not at all, take in raw data or intermediate calculations in a research manuscript.
- Do not present the similar data more than once.
- Manuscript should complement any figures or tables, not duplicate the identical information.
- Never confuse figures with tables - there is a difference.

Approach

- As forever, use past tense when you submit to your results, and put the whole thing in a reasonable order.
- Put figures and tables, appropriately numbered, in order at the end of the report
- If you desire, you may place your figures and tables properly within the text of your results part.

Figures and tables

- If you put figures and tables at the end of the details, make certain that they are visibly distinguished from any attach appendix materials, such as raw facts
- Despite of position, each figure must be numbered one after the other and complete with subtitle
- In spite of position, each table must be titled, numbered one after the other and complete with heading
- All figure and table must be adequately complete that it could situate on its own, divide from text

**Discussion:**

The Discussion is expected the trickiest segment to write and describe. A lot of papers submitted for journal are discarded based on problems with the Discussion. There is no head of state for how long a argument should be. Position your understanding of the outcome visibly to lead the reviewer through your conclusions, and then finish the paper with a summing up of the implication of the study. The purpose here is to offer an understanding of your results and hold up for all of your conclusions, using facts from your research and generally accepted information, if suitable. The implication of result should be visibly described. Infer your data in the conversation in suitable depth. This means that when you clarify an observable fact you must explain mechanisms that may account for the observation. If your results vary from your prospect, make clear why that may have happened. If your results agree, then explain the theory that the proof supported. It is never suitable to just state that the data approved with prospect, and let it drop at that.

- Make a decision if each premise is supported, discarded, or if you cannot make a conclusion with assurance. Do not just dismiss a study or part of a study as "uncertain."
- Research papers are not acknowledged if the work is imperfect. Draw what conclusions you can based upon the results that you have, and take care of the study as a finished work
- You may propose future guidelines, such as how the experiment might be personalized to accomplish a new idea.
- Give details all of your remarks as much as possible, focus on mechanisms.
- Make a decision if the tentative design sufficiently addressed the theory, and whether or not it was correctly restricted.
- Try to present substitute explanations if sensible alternatives be present.
- One research will not counter an overall question, so maintain the large picture in mind, where do you go next? The best studies unlock new avenues of study. What questions remain?
- Recommendations for detailed papers will offer supplementary suggestions.

Approach:

- When you refer to information, differentiate data generated by your own studies from available information
- Submit to work done by specific persons (including you) in past tense.
- Submit to generally acknowledged facts and main beliefs in present tense.

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| Topics | Grades | | |
|---|---|---|---|
| | **A-B** | **C-D** | **E-F** |
| ***Abstract*** | Clear and concise with appropriate content, Correct format. 200 words or below | Unclear summary and no specific data, Incorrect form<br><br>Above 200 words | No specific data with ambiguous information<br><br>Above 250 words |
| ***Introduction*** | Containing all background details with clear goal and appropriate details, flow specification, no grammar and spelling mistake, well organized sentence and paragraph, reference cited | Unclear and confusing data, appropriate format, grammar and spelling errors with unorganized matter | Out of place depth and content, hazy format |
| ***Methods and Procedures*** | Clear and to the point with well arranged paragraph, precision and accuracy of facts and figures, well organized subheads | Difficult to comprehend with embarrassed text, too much explanation but completed | Incorrect and unorganized structure with hazy meaning |
| ***Result*** | Well organized, Clear and specific, Correct units with precision, correct data, well structuring of paragraph, no grammar and spelling mistake | Complete and embarrassed text, difficult to comprehend | Irregular format with wrong facts and figures |
| ***Discussion*** | Well organized, meaningful specification, sound conclusion, logical and concise explanation, highly structured paragraph reference cited | Wordy, unclear conclusion, spurious | Conclusion is not cited, unorganized, difficult to comprehend |
| ***References*** | Complete and correct format, well organized | Beside the point, Incomplete | Wrong format and structuring |

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